



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁷ : C12N 15/12, C07K 14/47, C12N 15/62, 15/11, C12Q 1/68, G01N 33/68, C07K 16/18		A2	(11) International Publication Number: WO 00/36107
			(43) International Publication Date: 22 June 2000 (22.06.00)
(21) International Application Number: PCT/US99/30270 (22) International Filing Date: 17 December 1999 (17.12.99) (30) Priority Data: 09/215,681 17 December 1998 (17.12.98) US 09/216,003 17 December 1998 (17.12.98) US 09/338,933 23 June 1999 (23.06.99) US 09/404,879 24 September 1999 (24.09.99) US (71) Applicant: CORIXA CORPORATION [US/US]; Suite 200, 1124 Columbia Street, Seattle, WA 98104 (US). (72) Inventors: MITCHAM, Jennifer, L.; 16677 Northeast 88th Street, Redmond, WA 98052 (US). KING, Gordon, E.; 1530 NW 52nd, #304, Seattle, WA 98107 (US). ALGATE, Paul, A.; 2010 Franklin Avenue E., #301, Seattle, WA 98102 (US). FRUDAKIS, Tony, N.; 7937 Broadmoor Pines Boulevard, Sarasoto, FL 34243 (US). (74) Agents: MAKI, David, J. et al.; Seed and Berry LLP, Suite 6300, 701 Fifth Avenue, Seattle, WA 98104-7092 (US).		(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>Without international search report and to be republished upon receipt of that report.</i>	
(54) Title: COMPOSITIONS AND METHODS FOR THERAPY AND DIAGNOSIS OF OVARIAN CANCER			
<p>O8Efulllength.seq(1>2627) Est1987589_cons.seq(1>1075) AnchoredPCRcons.seq(1>260) ESTxO8EPCR.seq(1>1300) O8E+dBESTs_cons.seq(1>1810) OrigO8Econs.SEQ(1>1567)</p>			
(57) Abstract <p>Compositions and methods for the therapy and diagnosis of cancer, such as ovarian cancer, are disclosed. Compositions may comprise one or more ovarian carcinoma proteins, immunogenic portions thereof, polynucleotides that encode such portions or antibodies or immune system cells specific for such proteins. Such compositions may be used, for example, for the prevention and treatment of diseases such as ovarian cancer. Methods are further provided for identifying tumor antigens that are secreted from ovarian carcinomas and/or other tumors. Polypeptides and polynucleotides as provided herein may further be used for the diagnosis and monitoring of ovarian cancer.</p>			

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COMPOSITIONS AND METHODS FOR THERAPY AND DIAGNOSIS OF OVARIAN CANCER

TECHNICAL FIELD

The present invention relates generally to ovarian cancer therapy. The invention is more specifically related to polypeptides comprising at least a portion of an ovarian carcinoma protein, and to polynucleotides encoding such polypeptides, as well as antibodies and immune system cells that specifically recognize such polypeptides. Such polypeptides, polynucleotides, antibodies and cells may be used in vaccines and pharmaceutical compositions for treatment of ovarian cancer.

10 BACKGROUND OF THE INVENTION

Ovarian cancer is a significant health problem for women in the United States and throughout the world. Although advances have been made in detection and therapy of this cancer, no vaccine or other universally successful method for prevention or treatment is currently available. Management of the disease currently relies on a combination of early diagnosis and aggressive treatment, which may include one or more of a variety of treatments such as surgery, radiotherapy, chemotherapy and hormone therapy. The course of treatment for a particular cancer is often selected based on a variety of prognostic parameters, including an analysis of specific tumor markers. However, the use of established markers often leads to a result that is difficult to interpret, and high mortality continues to be observed in many cancer patients.

Immunotherapies have the potential to substantially improve cancer treatment and survival. Such therapies may involve the generation or enhancement of an immune response to an ovarian carcinoma antigen. However, to date, relatively few ovarian carcinoma antigens are known and the generation of an immune response against such antigens has not been shown to be therapeutically beneficial.

Accordingly, there is a need in the art for improved methods for identifying ovarian tumor antigens and for using such antigens in the therapy of ovarian cancer. The present invention fulfills these needs and further provides other related advantages.

SUMMARY OF THE INVENTION

Briefly stated, this invention provides compositions and methods for the therapy of cancer, such as ovarian cancer. In one aspect, the present invention provides polypeptides comprising an immunogenic portion of an ovarian carcinoma protein, or a variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with ovarian carcinoma protein-specific antisera is not substantially diminished. Within certain embodiments, the ovarian carcinoma protein comprises a sequence that is encoded by a polynucleotide sequence selected from the group consisting of SEQ ID NOs:1-81, 313-331, 359, 366, 379, 385-387, 391 and complements of such polynucleotides.

The present invention further provides polynucleotides that encode a polypeptide as described above or a portion thereof, expression vectors comprising such polynucleotides and host cells transformed or transfected with such expression vectors.

Within other aspects, the present invention provides pharmaceutical compositions and vaccines. Pharmaceutical compositions may comprise a physiologically acceptable carrier or excipient in combination with one or more of: (i) a polypeptide comprising an immunogenic portion of an ovarian carcinoma protein, or a variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with ovarian carcinoma protein-specific antisera is not substantially diminished, wherein the ovarian carcinoma protein comprises an amino acid sequence encoded by a polynucleotide that comprises a sequence recited in any one of SEQ ID NOs:1-81, 313-331, 359, 366, 379, 385-387 or 391; (ii) a polynucleotide encoding such a polypeptide; (iii) an antibody that specifically binds to such a polypeptide; (iv) an antigen-presenting cell that expresses such a polypeptide and/or (v) a T cell that specifically reacts with such a polypeptide. Vaccines may comprise a non-specific immune response enhancer in combination with one or more of: (i) a polypeptide comprising an immunogenic portion of an ovarian carcinoma protein; or a variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with ovarian carcinoma protein-specific antisera is not substantially diminished, wherein the ovarian carcinoma protein comprises an amino acid sequence encoded by a

polynucleotide that comprises a sequence recited in any one of SEQ ID NOs:1-81, 313-331, 359, 366, 379, 385-387 or 391; (ii) a polynucleotide encoding such a polypeptide; (iii) an anti-idiotypic antibody that is specifically bound by an antibody that specifically binds to such a polypeptide; (iv) an antigen-presenting cell that expresses such a polypeptide and/or (v) a T cell that specifically reacts with such a polypeptide.

The present invention further provides, in other aspects, fusion proteins that comprise at least one polypeptide as described above, as well as polynucleotides encoding such fusion proteins.

Within related aspects, pharmaceutical compositions comprising a fusion protein or polynucleotide encoding a fusion protein in combination with a physiologically acceptable carrier are provided.

Vaccines are further provided, within other aspects, comprising a fusion protein or polynucleotide encoding a fusion protein in combination with a non-specific immune response enhancer.

Within further aspects, the present invention provides methods for inhibiting the development of a cancer in a patient, comprising administering to a patient a pharmaceutical composition or vaccine as recited above.

The present invention further provides, within other aspects, methods for stimulating and/or expanding T cells, comprising contacting T cells with (a) a polypeptide comprising an immunogenic portion of an ovarian carcinoma protein, or a variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with ovarian carcinoma protein-specific antisera is not substantially diminished, wherein the ovarian carcinoma protein comprises an amino acid sequence encoded by a polynucleotide that comprises a sequence recited in any one of SEQ ID NOs:1-387 or 391; (b) a polynucleotide encoding such a polypeptide and/or (c) an antigen presenting cell that expresses such a polypeptide under conditions and for a time sufficient to permit the stimulation and/or expansion of T cells. Such polypeptide, polynucleotide and/or antigen presenting cell(s) may be present within a pharmaceutical composition or vaccine, for use in stimulating and/or expanding T cells in a mammal.

Within other aspects, the present invention provides methods for inhibiting the development of ovarian cancer in a patient, comprising administering to a patient T cells prepared as described above.

Within further aspects, the present invention provides methods for
5 inhibiting the development of ovarian cancer in a patient, comprising the steps of: (a) incubating $CD4^+$ and/or $CD8^+$ T cells isolated from a patient with one or more of: (i) a polypeptide comprising an immunogenic portion of an ovarian carcinoma protein, or a variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with ovarian carcinoma protein-
10 specific antisera is not substantially diminished, wherein the ovarian carcinoma protein comprises an amino acid sequence encoded by a polynucleotide that comprises a sequence recited in any one of SEQ ID NOs: 1-387 or 391; (ii) a polynucleotide encoding such a polypeptide; or (iii) an antigen-presenting cell that expresses such a polypeptide; such that T cells proliferate; and (b) administering to the patient an
15 effective amount of the proliferated T cells, and thereby inhibiting the development of ovarian cancer in the patient. The proliferated cells may be cloned prior to administration to the patient.

The present invention also provides, within other aspects, methods for identifying secreted tumor antigens. Such methods comprise the steps of: (a)
20 implanting tumor cells in an immunodeficient mammal; (b) obtaining serum from the immunodeficient mammal after a time sufficient to permit secretion of tumor antigens into the serum; (c) immunizing an immunocompetent mammal with the serum; (d) obtaining antiserum from the immunocompetent mammal; and (e) screening a tumor expression library with the antiserum, and therefrom identifying a secreted tumor
25 antigen. A preferred method for identifying a secreted ovarian carcinoma antigen comprises the steps of: (a) implanting ovarian carcinoma cells in a SCID mouse; (b) obtaining serum from the SCID mouse after a time sufficient to permit secretion of ovarian carcinoma antigens into the serum; (c) immunizing an immunocompetent mouse with the serum; (d) obtaining antiserum from the immunocompetent mouse; and
30 (e) screening an ovarian carcinoma expression library with the antiserum, and therefrom identifying a secreted ovarian carcinoma antigen.

These and other aspects of the present invention will become apparent upon reference to the following detailed description and attached drawings. All references disclosed herein are hereby incorporated by reference in their entirety as if each was incorporated individually.

5 BRIEF DESCRIPTION OF THE DRAWINGS

Figures 1A-1S (SEQ ID NOs:1-71) depict partial sequences of polynucleotides encoding representative secreted ovarian carcinoma antigens.

Figures 2A-2C depict full insert sequences for three of the clones of Figure 1. Figure 2A shows the sequence designated O7E (11731; SEQ ID NO:72),
10 Figure 2B shows the sequence designated O9E (11785; SEQ ID NO:73) and Figure 2C shows the sequence designated O8E (13695; SEQ ID NO:74).

Figure 3 presents results of microarray expression analysis of the ovarian carcinoma sequence designated O8E.

Figure 4 presents a partial sequence of a polynucleotide (designated 3g;
15 SEQ ID NO:75) encoding an ovarian carcinoma sequence that is a splice fusion between the human T-cell leukemia virus type I oncoprotein TAX and osteonectin.

Figure 5 presents the ovarian carcinoma polynucleotide designated 3f (SEQ ID NO:76).

Figure 6 presents the ovarian carcinoma polynucleotide designated 6b
20 (SEQ ID NO:77).

Figures 7A and 7B present the ovarian carcinoma polynucleotides designated 8e (SEQ ID NO:78) and 8h (SEQ ID NO:79).

Figure 8 presents the ovarian carcinoma polynucleotide designated 12c (SEQ ID NO:80).

Figure 9 presents the ovarian carcinoma polynucleotide designated 12h
25 (SEQ ID NO:81).

Figure 10 depicts results of microarray expression analysis of the ovarian carcinoma sequence designated 3f.

Figure 11 depicts results of microarray expression analysis of the ovarian
30 carcinoma sequence designated 6b.

Figure 12 depicts results of microarray expression analysis of the ovarian carcinoma sequence designated 8e.

Figure 13 depicts results of microarray expression analysis of the ovarian carcinoma sequence designated 12c.

5 Figure 14 depicts results of microarray expression analysis of the ovarian carcinoma sequence designated 12h.

Figures 15A-15EEE depict partial sequences of additional polynucleotides encoding representative secreted ovarian carcinoma antigens (SEQ ID NOs:82-310).

10 Figure 16 is a diagram illustrating the location of various partial O8E sequences within the full length sequence.

DETAILED DESCRIPTION OF THE INVENTION

As noted above, the present invention is generally directed to compositions and methods for the therapy of cancer, such as ovarian cancer. The
15 compositions described herein may include immunogenic polypeptides, polynucleotides encoding such polypeptides, binding agents such as antibodies that bind to a polypeptide, antigen presenting cells (APCs) and/or immune system cells (*e.g.*, T cells).

Polypeptides of the present invention generally comprise at least an immunogenic portion of an ovarian carcinoma protein or a variant thereof. Certain
20 ovarian carcinoma proteins have been identified using an immunoassay technique, and are referred to herein as ovarian carcinoma antigens. An "ovarian carcinoma antigen" is a protein that is expressed by ovarian tumor cells (preferably human cells) at a level that is at least two fold higher than the level in normal ovarian cells. Certain ovarian carcinoma antigens react detectably (within an immunoassay, such as an ELISA or
25 Western blot) with antisera generated against serum from an immunodeficient animal implanted with a human ovarian tumor. Such ovarian carcinoma antigens are shed or secreted from an ovarian tumor into the sera of the immunodeficient animal. Accordingly, certain ovarian carcinoma antigens provided herein are secreted antigens. Certain nucleic acid sequences of the subject invention generally comprise a DNA or

RNA sequence that encodes all or a portion of such a polypeptide, or that is complementary to such a sequence.

The present invention further provides ovarian carcinoma sequences that are identified using techniques to evaluate altered expression within an ovarian tumor.

5 Such sequences may be polynucleotide or protein sequences. Ovarian carcinoma sequences are generally expressed in an ovarian tumor at a level that is at least two fold, and preferably at least five fold, greater than the level of expression in normal ovarian tissue, as determined using a representative assay provided herein. Certain partial ovarian carcinoma polynucleotide sequences are presented herein. Proteins encoded by

10 genes comprising such polynucleotide sequences (or complements thereof) are also considered ovarian carcinoma proteins.

Antibodies are generally immune system proteins, or antigen-binding fragments thereof, that are capable of binding to at least a portion of an ovarian carcinoma polypeptide as described herein. T cells that may be employed within the

15 compositions provided herein are generally T cells (*e.g.*, CD4⁺ and/or CD8⁺) that are specific for such a polypeptide. Certain methods described herein further employ antigen-presenting cells (such as dendritic cells or macrophages) that express an ovarian carcinoma polypeptide as provided herein.

20 OVARIAN CARCINOMA POLYNUCLEOTIDES

Any polynucleotide that encodes an ovarian carcinoma protein or a portion or other variant thereof as described herein is encompassed by the present invention. Preferred polynucleotides comprise at least 15 consecutive nucleotides, preferably at least 30 consecutive nucleotides, and more preferably at least 45

25 consecutive nucleotides, that encode a portion of an ovarian carcinoma protein. More preferably, a polynucleotide encodes an immunogenic portion of an ovarian carcinoma protein, such as an ovarian carcinoma antigen. Polynucleotides complementary to any such sequences are also encompassed by the present invention. Polynucleotides may be single-stranded (coding or antisense) or double-stranded, and may be DNA (genomic,

30 cDNA or synthetic) or RNA molecules. Additional coding or non-coding sequences may, but need not, be present within a polynucleotide of the present invention, and a

polynucleotide may, but need not, be linked to other molecules and/or support materials.

Polynucleotides may comprise a native sequence (*i.e.*, an endogenous sequence that encodes an ovarian carcinoma protein or a portion thereof) or may
5 comprise a variant of such a sequence. Polynucleotide variants may contain one or more substitutions, additions, deletions and/or insertions such that the immunogenicity of the encoded polypeptide is not diminished, relative to a native ovarian carcinoma protein. The effect on the immunogenicity of the encoded polypeptide may generally be assessed as described herein. Variants preferably exhibit at least about 70% identity,
10 more preferably at least about 80% identity and most preferably at least about 90% identity to a polynucleotide sequence that encodes a native ovarian carcinoma protein or a portion thereof.

The percent identity for two polynucleotide or polypeptide sequences may be readily determined by comparing sequences using computer algorithms well
15 known to those of ordinary skill in the art, such as Megalign, using default parameters. Comparisons between two sequences are typically performed by comparing the sequences over a comparison window to identify and compare local regions of sequence similarity. A "comparison window" as used herein, refers to a segment of at least about 20 contiguous positions, usually 30 to about 75, or 40 to about 50, in which a sequence
20 may be compared to a reference sequence of the same number of contiguous positions after the two sequences are optimally aligned. Optimal alignment of sequences for comparison may be conducted, for example, using the Megalign program in the Lasergene suite of bioinformatics software (DNASTAR, Inc., Madison, WI), using default parameters. Preferably, the percentage of sequence identity is determined by
25 comparing two optimally aligned sequences over a window of comparison of at least 20 positions, wherein the portion of the polynucleotide or polypeptide sequence in the window may comprise additions or deletions (*i.e.*, gaps) of 20 % or less, usually 5 to 15 %, or 10 to 12%, relative to the reference sequence (which does not contain additions or deletions). The percent identity may be calculated by determining the number of
30 positions at which the identical nucleic acid bases or amino acid residue occurs in both sequences to yield the number of matched positions, dividing the number of matched

positions by the total number of positions in the reference sequence (*i.e.*, the window size) and multiplying the results by 100 to yield the percentage of sequence identity.

Variants may also, or alternatively, be substantially homologous to a native gene, or a portion or complement thereof. Such polynucleotide variants are
5 capable of hybridizing under moderately stringent conditions to a naturally occurring DNA sequence encoding a native ovarian carcinoma protein (or a complementary sequence). Suitable moderately stringent conditions include prewashing in a solution of 5 X SSC, 0.5% SDS, 1.0 mM EDTA (pH 8.0); hybridizing at 50°C-65°C, 5 X SSC, overnight; followed by washing twice at 65°C for 20 minutes with each of 2X, 0.5X and
10 0.2X SSC containing 0.1% SDS.

It will be appreciated by those of ordinary skill in the art that, as a result of the degeneracy of the genetic code, there are many nucleotide sequences that encode a polypeptide as described herein. Some of these polynucleotides bear minimal homology to the nucleotide sequence of any native gene. Nonetheless, polynucleotides
15 that vary due to differences in codon usage are specifically contemplated by the present invention. Further, alleles of the genes comprising the polynucleotide sequences provided herein are within the scope of the present invention. Alleles are endogenous genes that are altered as a result of one or more mutations, such as deletions, additions and/or substitutions of nucleotides. The resulting mRNA and protein may, but need
20 not, have an altered structure or function. Alleles may be identified using standard techniques (such as hybridization, amplification and/or database sequence comparison).

Polynucleotides may be prepared using any of a variety of techniques. For example, an ovarian carcinoma polynucleotide may be identified, as described in more detail below, by screening a late passage ovarian tumor expression library with
25 antisera generated against sera of immunocompetent mice after injection of such mice with sera from SCID mice implanted with late passage ovarian tumors. Ovarian carcinoma polynucleotides may also be identified using any of a variety of techniques designed to evaluate differential gene expression. Alternatively, polynucleotides may be amplified from cDNA prepared from ovarian tumor cells. Such polynucleotides may
30 be amplified via polymerase chain reaction (PCR). For this approach, sequence-specific

primers may be designed based on the sequences provided herein, and may be purchased or synthesized.

An amplified portion may be used to isolate a full length gene from a suitable library (*e.g.*, an ovarian carcinoma cDNA library) using well known techniques.

5 Within such techniques, a library (cDNA or genomic) is screened using one or more polynucleotide probes or primers suitable for amplification. Preferably, a library is size-selected to include larger molecules. Random primed libraries may also be preferred for identifying 5' and upstream regions of genes. Genomic libraries are preferred for obtaining introns and extending 5' sequences.

10 For hybridization techniques, a partial sequence may be labeled (*e.g.*, by nick-translation or end-labeling with ³²P) using well known techniques. A bacterial or bacteriophage library is then screened by hybridizing filters containing denatured bacterial colonies (or lawns containing phage plaques) with the labeled probe (*see* Sambrook et al., *Molecular Cloning: A Laboratory Manual*, Cold Spring Harbor
15 Laboratories, Cold Spring Harbor, NY, 1989). Hybridizing colonies or plaques are selected and expanded, and the DNA is isolated for further analysis. cDNA clones may be analyzed to determine the amount of additional sequence by, for example, PCR using a primer from the partial sequence and a primer from the vector. Restriction maps and partial sequences may be generated to identify one or more overlapping clones. The
20 complete sequence may then be determined using standard techniques, which may involve generating a series of deletion clones. The resulting overlapping sequences are then assembled into a single contiguous sequence. A full length cDNA molecule can be generated by ligating suitable fragments, using well known techniques.

Alternatively, there are numerous amplification techniques for obtaining
25 a full length coding sequence from a partial cDNA sequence. Within such techniques, amplification is generally performed via PCR. Any of a variety of commercially available kits may be used to perform the amplification step. Primers may be designed using, for example, software well known in the art. Primers are preferably 22-30 nucleotides in length, have a GC content of at least 50% and anneal to the target
30 sequence at temperatures of about 68°C to 72°C. The amplified region may be

sequenced as described above, and overlapping sequences assembled into a contiguous sequence.

One such amplification technique is inverse PCR (*see* Triglia et al., *Nucl. Acids Res.* 16:8186, 1988), which uses restriction enzymes to generate a fragment in the known region of the gene. The fragment is then circularized by intramolecular ligation and used as a template for PCR with divergent primers derived from the known region. Within an alternative approach, sequences adjacent to a partial sequence may be retrieved by amplification with a primer to a linker sequence and a primer specific to a known region. The amplified sequences are typically subjected to a second round of amplification with the same linker primer and a second primer specific to the known region. A variation on this procedure, which employs two primers that initiate extension in opposite directions from the known sequence, is described in WO 96/38591. Additional techniques include capture PCR (Lagerstrom et al., *PCR Methods Applic.* 1:111-19, 1991) and walking PCR (Parker et al., *Nucl. Acids. Res.* 19:3055-60, 1991). Other methods employing amplification may also be employed to obtain a full length cDNA sequence.

In certain instances, it is possible to obtain a full length cDNA sequence by analysis of sequences provided in an expressed sequence tag (EST) database, such as that available from GenBank. Searches for overlapping ESTs may generally be performed using well known programs (*e.g.*, NCBI BLAST searches), and such ESTs may be used to generate a contiguous full length sequence.

Certain nucleic acid sequences of cDNA molecules encoding portions of ovarian carcinoma antigens are provided in Figures 1A-1S (SEQ ID NOS:1 to 71) and Figures 15A to 15EEE (SEQ ID NOS:82 to 310). The sequences provided in Figures 1A-1S appear to be novel. For sequences in Figures 15A-15EEE, database searches revealed matches having substantial identity. These polynucleotides were isolated by serological screening of an ovarian tumor cDNA expression library, using a technique designed to identify secreted tumor antigens. Briefly, a late passage ovarian tumor expression library was prepared from a SCID-derived human ovarian tumor (OV9334) in the vector λ -screen (Novagen). The sera used for screening were obtained by injecting immunocompetent mice with sera from SCID mice implanted with one late

passage ovarian tumors. This technique permits the identification of cDNA molecules that encode immunogenic portions of secreted tumor antigens.

The polynucleotides recited herein, as well as full length polynucleotides comprising such sequences, other portions of such full length polynucleotides, and sequences complementary to all or a portion of such full length molecules, are specifically encompassed by the present invention. It will be apparent to those of ordinary skill in the art that this technique can also be applied to the identification of antigens that are secreted from other types of tumors.

Other nucleic acid sequences of cDNA molecules encoding portions of ovarian carcinoma proteins are provided in Figures 4-9 (SEQ ID NOs:75-81), as well as SEQ ID NOs:313-384. These sequences were identified by screening a microarray of cDNAs for tumor-associated expression (*i.e.*, expression that is at least five fold greater in an ovarian tumor than in normal ovarian tissue, as determined using a representative assay provided herein). Such screens were performed using a Synteni microarray (Palo Alto, CA) according to the manufacturer's instructions (and essentially as described by Schena et al., *Proc. Natl. Acad. Sci. USA* 93:10614-10619, 1996 and Heller et al., *Proc. Natl. Acad. Sci. USA* 94:2150-2155, 1997). SEQ ID NOs:311 and 391 provide full length sequences incorporating certain of these nucleic acid sequences.

Any of a variety of well known techniques may be used to evaluate tumor-associated expression of a cDNA. For example, hybridization techniques using labeled polynucleotide probes may be employed. Alternatively, or in addition, amplification techniques such as real-time PCR may be used (*see* Gibson et al., *Genome Research* 6:995-1001, 1996; Heid et al., *Genome Research* 6:986-994, 1996). Real-time PCR is a technique that evaluates the level of PCR product accumulation during amplification. This technique permits quantitative evaluation of mRNA levels in multiple samples. Briefly, mRNA is extracted from tumor and normal tissue and cDNA is prepared using standard techniques. Real-time PCR may be performed, for example, using a Perkin Elmer/Applied Biosystems (Foster City, CA) 7700 Prism instrument. Matching primers and fluorescent probes may be designed for genes of interest using, for example, the primer express program provided by Perkin Elmer/Applied Biosystems (Foster City, CA). Optimal concentrations of primers and probes may be initially

determined by those of ordinary skill in the art, and control (e.g., β -actin) primers and probes may be obtained commercially from, for example, Perkin Elmer/Applied Biosystems (Foster City, CA). To quantitate the amount of specific RNA in a sample, a standard curve is generated alongside using a plasmid containing the gene of interest.

5 Standard curves may be generated using the Ct values determined in the real-time PCR, which are related to the initial cDNA concentration used in the assay. Standard dilutions ranging from 10^{-10} to 10^{-6} copies of the gene of interest are generally sufficient. In addition, a standard curve is generated for the control sequence. This permits standardization of initial RNA content of a tissue sample to the amount of control for

10 comparison purposes.

Polynucleotide variants may generally be prepared by any method known in the art, including chemical synthesis by, for example, solid phase phosphoramidite chemical synthesis. Modifications in a polynucleotide sequence may also be introduced using standard mutagenesis techniques, such as oligonucleotide-

15 directed site-specific mutagenesis (see Adelman et al., *DNA* 2:183, 1983). Alternatively, RNA molecules may be generated by *in vitro* or *in vivo* transcription of DNA sequences encoding an ovarian carcinoma antigen, or portion thereof, provided that the DNA is incorporated into a vector with a suitable RNA polymerase promoter (such as T7 or SP6). Certain portions may be used to prepare an encoded polypeptide,

20 as described herein. In addition, or alternatively, a portion may be administered to a patient such that the encoded polypeptide is generated *in vivo*.

A portion of a sequence complementary to a coding sequence (i.e., an antisense polynucleotide) may also be used as a probe or to modulate gene expression. cDNA constructs that can be transcribed into antisense RNA may also be introduced

25 into cells or tissues to facilitate the production of antisense RNA. An antisense polynucleotide may be used, as described herein, to inhibit expression of an ovarian carcinoma protein. Antisense technology can be used to control gene expression through triple-helix formation, which compromises the ability of the double helix to open sufficiently for the binding of polymerases, transcription factors or regulatory

30 molecules (see Gee et al., In Huber and Carr, *Molecular and Immunologic Approaches*, Futura Publishing Co. (Mt. Kisco, NY; 1994). Alternatively, an antisense molecule

may be designed to hybridize with a control region of a gene (*e.g.*, promoter, enhancer or transcription initiation site), and block transcription of the gene; or to block translation by inhibiting binding of a transcript to ribosomes.

Any polynucleotide may be further modified to increase stability *in vivo*.

5 Possible modifications include, but are not limited to, the addition of flanking sequences at the 5' and/or 3' ends; the use of phosphorothioate or 2' O-methyl rather than phosphodiesterase linkages in the backbone; and/or the inclusion of nontraditional bases such as inosine, queosine and wybutosine, as well as acetyl-, methyl-, thio- and other modified forms of adenine, cytidine, guanine, thymine and uridine.

10 Nucleotide sequences as described herein may be joined to a variety of other nucleotide sequences using established recombinant DNA techniques. For example, a polynucleotide may be cloned into any of a variety of cloning vectors, including plasmids, phagemids, lambda phage derivatives and cosmids. Vectors of particular interest include expression vectors, replication vectors, probe generation
15 vectors and sequencing vectors. In general, a vector will contain an origin of replication functional in at least one organism, convenient restriction endonuclease sites and one or more selectable markers. Other elements will depend upon the desired use, and will be apparent to those of ordinary skill in the art.

Within certain embodiments, polynucleotides may be formulated so as to
20 permit entry into a cell of a mammal, and expression therein. Such formulations are particularly useful for therapeutic purposes, as described below. Those of ordinary skill in the art will appreciate that there are many ways to achieve expression of a polynucleotide in a target cell, and any suitable method may be employed. For example, a polynucleotide may be incorporated into a viral vector such as, but not
25 limited to, adenovirus, adeno-associated virus, retrovirus, or vaccinia or other pox virus (*e.g.*, avian pox virus). Techniques for incorporating DNA into such vectors are well known to those of ordinary skill in the art. A retroviral vector may additionally transfer or incorporate a gene for a selectable marker (to aid in the identification or selection of transduced cells) and/or a targeting moiety, such as a gene that encodes a ligand for a
30 receptor on a specific target cell, to render the vector target specific. Targeting may

also be accomplished using an antibody, by methods known to those of ordinary skill in the art.

Other formulations for therapeutic purposes include colloidal dispersion systems, such as macromolecule complexes, nanocapsules, microspheres, beads, and lipid-based systems including oil-in-water emulsions, micelles, mixed micelles, and liposomes. A preferred colloidal system for use as a delivery vehicle *in vitro* and *in vivo* is a liposome (*i.e.*, an artificial membrane vesicle). The preparation and use of such systems is well known in the art.

10 OVARIAN CARCINOMA POLYPEPTIDES

Within the context of the present invention, polypeptides may comprise at least an immunogenic portion of an ovarian carcinoma protein or a variant thereof, as described herein. As noted above, certain ovarian carcinoma proteins are ovarian carcinoma antigens that are expressed by ovarian tumor cells and react detectably within an immunoassay (such as an ELISA) with antisera generated against serum from an immunodeficient animal implanted with an ovarian tumor. Other ovarian carcinoma proteins are encoded by ovarian carcinoma polynucleotides recited herein. Polypeptides as described herein may be of any length. Additional sequences derived from the native protein and/or heterologous sequences may be present, and such sequences may (but need not) possess further immunogenic or antigenic properties.

An "immunogenic portion," as used herein is a portion of an antigen that is recognized (*i.e.*, specifically bound) by a B-cell and/or T-cell surface antigen receptor. Such immunogenic portions generally comprise at least 5 amino acid residues, more preferably at least 10, and still more preferably at least 20 amino acid residues of an ovarian carcinoma protein or a variant thereof. Preferred immunogenic portions are encoded by cDNA molecules isolated as described herein. Further immunogenic portions may generally be identified using well known techniques, such as those summarized in Paul, *Fundamental Immunology*, 3rd ed., 243-247 (Raven Press, 1993) and references cited therein. Such techniques include screening polypeptides for the ability to react with ovarian carcinoma protein-specific antibodies, antisera and/or T-cell lines or clones. As used herein, antisera and antibodies are "ovarian carcinoma

protein-specific" if they specifically bind to an ovarian carcinoma protein (*i.e.*, they react with the ovarian carcinoma protein in an ELISA or other immunoassay, and do not react detectably with unrelated proteins). Such antisera, antibodies and T cells may be prepared as described herein, and using well known techniques. An immunogenic
5 portion of a native ovarian carcinoma protein is a portion that reacts with such antisera, antibodies and/or T-cells at a level that is not substantially less than the reactivity of the full length polypeptide (*e.g.*, in an ELISA and/or T-cell reactivity assay). Such immunogenic portions may react within such assays at a level that is similar to or greater than the reactivity of the full length protein. Such screens may generally be
10 performed using methods well known to those of ordinary skill in the art, such as those described in Harlow and Lane, *Antibodies: A Laboratory Manual*, Cold Spring Harbor Laboratory, 1988. For example, a polypeptide may be immobilized on a solid support and contacted with patient sera to allow binding of antibodies within the sera to the immobilized polypeptide. Unbound sera may then be removed and bound antibodies
15 detected using, for example, ¹²⁵I-labeled Protein A.

As noted above, a composition may comprise a variant of a native ovarian carcinoma protein. A polypeptide "variant," as used herein, is a polypeptide that differs from a native ovarian carcinoma protein in one or more substitutions, deletions, additions and/or insertions, such that the immunogenicity of the polypeptide
20 is not substantially diminished. In other words, the ability of a variant to react with ovarian carcinoma protein-specific antisera may be enhanced or unchanged, relative to the native ovarian carcinoma protein, or may be diminished by less than 50%, and preferably less than 20%, relative to the native ovarian carcinoma protein. Such variants may generally be identified by modifying one of the above polypeptide
25 sequences and evaluating the reactivity of the modified polypeptide with ovarian carcinoma protein-specific antibodies or antisera as described herein. Preferred variants include those in which one or more portions, such as an N-terminal leader sequence or transmembrane domain, have been removed. Other preferred variants include variants in which a small portion (*e.g.*, 1-30 amino acids, preferably 5-15 amino acids) has been
30 removed from the N- and/or C-terminal of the mature protein.

Polypeptide variants preferably exhibit at least about 70%, more preferably at least about 90% and most preferably at least about 95% identity to the native polypeptide. Preferably, a variant contains conservative substitutions. A "conservative substitution" is one in which an amino acid is substituted for another amino acid that has similar properties, such that one skilled in the art of peptide chemistry would expect the secondary structure and hydrophobic nature of the polypeptide to be substantially unchanged. Amino acid substitutions may generally be made on the basis of similarity in polarity, charge, solubility, hydrophobicity, hydrophilicity and/or the amphipathic nature of the residues. For example, negatively charged amino acids include aspartic acid and glutamic acid; positively charged amino acids include lysine and arginine; and amino acids with uncharged polar head groups having similar hydrophilicity values include leucine, isoleucine and valine; glycine and alanine; asparagine and glutamine; and serine, threonine, phenylalanine and tyrosine. Other groups of amino acids that may represent conservative changes include: (1) ala, pro, gly, glu, asp, gln, asn, ser, thr; (2) cys, ser, tyr, thr; (3) val, ile, leu, met, ala, phe; (4) lys, arg, his; and (5) phe, tyr, trp, his. A variant may also, or alternatively, contain nonconservative changes. Variants may also (or alternatively) be modified by, for example, the deletion or addition of amino acids that have minimal influence on the immunogenicity, secondary structure and hydrophobic nature of the polypeptide.

As noted above, polypeptides may comprise a signal (or leader) sequence at the N-terminal end of the protein which co-translationally or post-translationally directs transfer of the protein. The polypeptide may also be conjugated to a linker or other sequence for ease of synthesis, purification or identification of the polypeptide (*e.g.*, poly-His), or to enhance binding of the polypeptide to a solid support. For example, a polypeptide may be conjugated to an immunoglobulin Fc region.

Polypeptides may be prepared using any of a variety of well known techniques. Recombinant polypeptides encoded by DNA sequences as described above may be readily prepared from the DNA sequences using any of a variety of expression vectors known to those of ordinary skill in the art. Expression may be achieved in any appropriate host cell that has been transformed or transfected with an expression vector containing a DNA molecule that encodes a recombinant polypeptide. Suitable host

cells include prokaryotes, yeast and higher eukaryotic cells. Preferably, the host cells employed are *E. coli*, yeast or a mammalian cell line such as COS or CHO. Supernatants from suitable host/vector systems which secrete recombinant protein or polypeptide into culture media may be first concentrated using a commercially available
5 filter. Following concentration, the concentrate may be applied to a suitable purification matrix such as an affinity matrix or an ion exchange resin. Finally, one or more reverse phase HPLC steps can be employed to further purify a recombinant polypeptide.

Portions and other variants having fewer than about 100 amino acids, and generally fewer than about 50 amino acids, may also be generated by synthetic
10 means, using techniques well known to those of ordinary skill in the art. For example, such polypeptides may be synthesized using any of the commercially available solid-phase techniques, such as the Merrifield solid-phase synthesis method, where amino acids are sequentially added to a growing amino acid chain. See Merrifield, *J. Am. Chem. Soc.* 85:2149-2146, 1963. Equipment for automated synthesis of polypeptides is
15 commercially available from suppliers such as Applied BioSystems, Inc. (Foster City, CA), and may be operated according to the manufacturer's instructions.

Within certain specific embodiments, a polypeptide may be a fusion protein that comprises multiple polypeptides as described herein, or that comprises one
20 polypeptide as described herein and a known tumor antigen, such as an ovarian carcinoma protein or a variant of such a protein. A fusion partner may, for example, assist in providing T-helper epitopes (an immunological fusion partner), preferably T helper epitopes recognized by humans, or may assist in expressing the protein (an expression enhancer) at higher yields than the native recombinant protein. Certain
25 preferred fusion partners are both immunological and expression enhancing fusion partners. Other fusion partners may be selected so as to increase the solubility of the protein or to enable the protein to be targeted to desired intracellular compartments. Still further fusion partners include affinity tags, which facilitate purification of the protein.

30 Fusion proteins may generally be prepared using standard techniques, including chemical conjugation. Preferably, a fusion protein is expressed as a

recombinant protein, allowing the production of increased levels, relative to a non-fused protein, in an expression system. Briefly, DNA sequences encoding the polypeptide components may be assembled separately, and ligated into an appropriate expression vector. The 3' end of the DNA sequence encoding one polypeptide component is
5 ligated, with or without a peptide linker, to the 5' end of a DNA sequence encoding the second polypeptide component so that the reading frames of the sequences are in phase. This permits translation into a single fusion protein that retains the biological activity of both component polypeptides.

A peptide linker sequence may be employed to separate the first and the
10 second polypeptide components by a distance sufficient to ensure that each polypeptide folds into its secondary and tertiary structures. Such a peptide linker sequence is incorporated into the fusion protein using standard techniques well known in the art. Suitable peptide linker sequences may be chosen based on the following factors: (1) their ability to adopt a flexible extended conformation; (2) their inability to adopt a
15 secondary structure that could interact with functional epitopes on the first and second polypeptides; and (3) the lack of hydrophobic or charged residues that might react with the polypeptide functional epitopes. Preferred peptide linker sequences contain Gly, Asn and Ser residues. Other near neutral amino acids, such as Thr and Ala may also be used in the linker sequence. Amino acid sequences which may be usefully employed as
20 linkers include those disclosed in Maratea et al., *Gene* 40:39-46, 1985; Murphy et al., *Proc. Natl. Acad. Sci. USA* 83:8258-8262, 1986; U.S. Patent No. 4,935,233 and U.S. Patent No. 4,751,180. The linker sequence may generally be from 1 to about 50 amino acids in length. Linker sequences are not required when the first and second polypeptides have non-essential N-terminal amino acid regions that can be used to
25 separate the functional domains and prevent steric interference.

The ligated DNA sequences are operably linked to suitable transcriptional or translational regulatory elements. The regulatory elements responsible for expression of DNA are located only 5' to the DNA sequence encoding the first polypeptides. Similarly, stop codons required to end translation and
30 transcription termination signals are only present 3' to the DNA sequence encoding the second polypeptide.

Fusion proteins are also provided that comprise a polypeptide of the present invention together with an unrelated immunogenic protein. Preferably the immunogenic protein is capable of eliciting a recall response. Examples of such proteins include tetanus, tuberculosis and hepatitis proteins (*see, for example, Stoute*
5 *et al. New Engl. J. Med.*, 336:86-91, 1997).

Within preferred embodiments, an immunological fusion partner is derived from protein D, a surface protein of the gram-negative bacterium *Haemophilus influenza B* (WO 91/18926). Preferably, a protein D derivative comprises approximately the first third of the protein (*e.g.*, the first N-terminal 100-110 amino
10 acids), and a protein D derivative may be lipidated. Within certain preferred embodiments, the first 109 residues of a Lipoprotein D fusion partner is included on the N-terminus to provide the polypeptide with additional exogenous T-cell epitopes and to increase the expression level in *E. coli* (thus functioning as an expression enhancer). The lipid tail ensures optimal presentation of the antigen to antigen present cells. Other
15 fusion partners include the non-structural protein from influenzae virus, NS1 (hemagglutinin). Typically, the N-terminal 81 amino acids are used, although different fragments that include T-helper epitopes may be used.

In another embodiment, the immunological fusion partner is the protein known as LYTA, or a portion thereof (preferably a C-terminal portion). LYTA is
20 derived from *Streptococcus pneumoniae*, which synthesizes an N-acetyl-L-alanine amidase known as amidase LYTA (encoded by the *LytA* gene; *Gene* 43:265-292, 1986). LYTA is an autolysin that specifically degrades certain bonds in the peptidoglycan backbone. The C-terminal domain of the LYTA protein is responsible for the affinity to the choline or to some choline analogues such as DEAE. This
25 property has been exploited for the development of *E. coli* C-LYTA expressing plasmids useful for expression of fusion proteins. Purification of hybrid proteins containing the C-LYTA fragment at the amino terminus has been described (*see Biotechnology* 10:795-798, 1992). Within a preferred embodiment, a repeat portion of LYTA may be incorporated into a fusion protein. A repeat portion is found in the C-
30 terminal region starting at residue 178. A particularly preferred repeat portion incorporates residues 188-305.

In general, polypeptides (including fusion proteins) and polynucleotides as described herein are isolated. An "isolated" polypeptide or polynucleotide is one that is removed from its original environment. For example, a naturally-occurring protein is isolated if it is separated from some or all of the coexisting materials in the natural system. Preferably, such polypeptides are at least about 90% pure, more preferably at least about 95% pure and most preferably at least about 99% pure. A polynucleotide is considered to be isolated if, for example, it is cloned into a vector that is not a part of the natural environment.

10 BINDING AGENTS

The present invention further provides agents, such as antibodies and antigen-binding fragments thereof, that specifically bind to an ovarian carcinoma protein. As used herein, an antibody, or antigen-binding fragment thereof, is said to "specifically bind" to an ovarian carcinoma protein if it reacts at a detectable level (within, for example, an ELISA) with an ovarian carcinoma protein, and does not react detectably with unrelated proteins under similar conditions. As used herein, "binding" refers to a noncovalent association between two separate molecules such that a "complex" is formed. The ability to bind may be evaluated by, for example, determining a binding constant for the formation of the complex. The binding constant is the value obtained when the concentration of the complex is divided by the product of the component concentrations. In general, two compounds are said to "bind," in the context of the present invention, when the binding constant for complex formation exceeds about 10^3 L/mol. The binding constant may be determined using methods well known in the art.

Binding agents may be further capable of differentiating between patients with and without a cancer, such as ovarian cancer, using the representative assays provided herein. In other words, antibodies or other binding agents that bind to an ovarian carcinoma antigen will generate a signal indicating the presence of a cancer in at least about 20% of patients with the disease, and will generate a negative signal indicating the absence of the disease in at least about 90% of individuals without the cancer. To determine whether a binding agent satisfies this requirement, biological

samples (e.g., blood, sera, leukophoresis, urine and/or tumor biopsies) from patients with and without a cancer (as determined using standard clinical tests) may be assayed as described herein for the presence of polypeptides that bind to the binding agent. It will be apparent that a statistically significant number of samples with and without the disease should be assayed. Each binding agent should satisfy the above criteria; however, those of ordinary skill in the art will recognize that binding agents may be used in combination to improve sensitivity.

Any agent that satisfies the above requirements may be a binding agent. For example, a binding agent may be a ribosome, with or without a peptide component, an RNA molecule or a polypeptide. In a preferred embodiment, a binding agent is an antibody or an antigen-binding fragment thereof. Antibodies may be prepared by any of a variety of techniques known to those of ordinary skill in the art. See, e.g., Harlow and Lane, *Antibodies: A Laboratory Manual*, Cold Spring Harbor Laboratory, 1988. In general, antibodies can be produced by cell culture techniques, including the generation of monoclonal antibodies as described herein, or via transfection of antibody genes into suitable bacterial or mammalian cell hosts, in order to allow for the production of recombinant antibodies. In one technique, an immunogen comprising the polypeptide is initially injected into any of a wide variety of mammals (e.g., mice, rats, rabbits, sheep or goats). In this step, the polypeptides of this invention may serve as the immunogen without modification. Alternatively, particularly for relatively short polypeptides, a superior immune response may be elicited if the polypeptide is joined to a carrier protein, such as bovine serum albumin or keyhole limpet hemocyanin. The immunogen is injected into the animal host, preferably according to a predetermined schedule incorporating one or more booster immunizations, and the animals are bled periodically. Polyclonal antibodies specific for the polypeptide may then be purified from such antisera by, for example, affinity chromatography using the polypeptide coupled to a suitable solid support.

Monoclonal antibodies specific for an antigenic polypeptide of interest may be prepared, for example, using the technique of Kohler and Milstein, *Eur. J. Immunol.* 6:511-519, 1976, and improvements thereto. Briefly, these methods involve the preparation of immortal cell lines capable of producing antibodies having the

desired specificity (*i.e.*, reactivity with the polypeptide of interest). Such cell lines may be produced, for example, from spleen cells obtained from an animal immunized as described above. The spleen cells are then immortalized by, for example, fusion with a myeloma cell fusion partner, preferably one that is syngeneic with the immunized animal. A variety of fusion techniques may be employed. For example, the spleen cells and myeloma cells may be combined with a nonionic detergent for a few minutes and then plated at low density on a selective medium that supports the growth of hybrid cells, but not myeloma cells. A preferred selection technique uses HAT (hypoxanthine, aminopterin, thymidine) selection. After a sufficient time, usually about 1 to 2 weeks, colonies of hybrids are observed. Single colonies are selected and their culture supernatants tested for binding activity against the polypeptide. Hybridomas having high reactivity and specificity are preferred.

Monoclonal antibodies may be isolated from the supernatants of growing hybridoma colonies. In addition, various techniques may be employed to enhance the yield, such as injection of the hybridoma cell line into the peritoneal cavity of a suitable vertebrate host, such as a mouse. Monoclonal antibodies may then be harvested from the ascites fluid or the blood. Contaminants may be removed from the antibodies by conventional techniques, such as chromatography, gel filtration, precipitation, and extraction. The polypeptides of this invention may be used in the purification process in, for example, an affinity chromatography step.

Within certain embodiments, the use of antigen-binding fragments of antibodies may be preferred. Such fragments include Fab fragments, which may be prepared using standard techniques. Briefly, immunoglobulins may be purified from rabbit serum by affinity chromatography on Protein A bead columns (Harlow and Lane, *Antibodies: A Laboratory Manual*, Cold Spring Harbor Laboratory, 1988) and digested by papain to yield Fab and Fc fragments. The Fab and Fc fragments may be separated by affinity chromatography on protein A bead columns.

Monoclonal antibodies of the present invention may be coupled to one or more therapeutic agents. Suitable agents in this regard include radionuclides, differentiation inducers, drugs, toxins, and derivatives thereof. Preferred radionuclides include ^{90}Y , ^{123}I , ^{125}I , ^{131}I , ^{186}Re , ^{188}Re , ^{211}At , and ^{212}Bi . Preferred drugs include

methotrexate, and pyrimidine and purine analogs. Preferred differentiation inducers include phorbol esters and butyric acid. Preferred toxins include ricin, abrin, diphtheria toxin, cholera toxin, gelonin, Pseudomonas exotoxin, Shigella toxin, and pokeweed antiviral protein.

5 A therapeutic agent may be coupled (*e.g.*, covalently bonded) to a suitable monoclonal antibody either directly or indirectly (*e.g.*, via a linker group). A direct reaction between an agent and an antibody is possible when each possesses a substituent capable of reacting with the other. For example, a nucleophilic group, such as an amino or sulfhydryl group, on one may be capable of reacting with a carbonyl-
10 containing group, such as an anhydride or an acid halide, or with an alkyl group containing a good leaving group (*e.g.*, a halide) on the other.

 Alternatively, it may be desirable to couple a therapeutic agent and an antibody via a linker group. A linker group can function as a spacer to distance an antibody from an agent in order to avoid interference with binding capabilities. A
15 linker group can also serve to increase the chemical reactivity of a substituent on an agent or an antibody, and thus increase the coupling efficiency. An increase in chemical reactivity may also facilitate the use of agents, or functional groups on agents, which otherwise would not be possible.

 It will be evident to those skilled in the art that a variety of bifunctional
20 or polyfunctional reagents, both homo- and hetero-functional (such as those described in the catalog of the Pierce Chemical Co., Rockford, IL), may be employed as the linker group. Coupling may be effected, for example, through amino groups, carboxyl groups, sulfhydryl groups or oxidized carbohydrate residues. There are numerous references describing such methodology, *e.g.*, U.S. Patent No. 4,671,958, to Rodwell et al.

25 Where a therapeutic agent is more potent when free from the antibody portion of the immunoconjugates of the present invention, it may be desirable to use a linker group which is cleavable during or upon internalization into a cell. A number of different cleavable linker groups have been described. The mechanisms for the intracellular release of an agent from these linker groups include cleavage by reduction
30 of a disulfide bond (*e.g.*, U.S. Patent No. 4,489,710, to Spitler), by irradiation of a photolabile bond (*e.g.*, U.S. Patent No. 4,625,014, to Senter et al.), by hydrolysis of

derivatized amino acid side chains (*e.g.*, U.S. Patent No. 4,638,045, to Kohn et al.), by serum complement-mediated hydrolysis (*e.g.*, U.S. Patent No. 4,671,958, to Rodwell et al.), and acid-catalyzed hydrolysis (*e.g.*, U.S. Patent No. 4,569,789, to Blattler et al.).

It may be desirable to couple more than one agent to an antibody. In one embodiment, multiple molecules of an agent are coupled to one antibody molecule. In another embodiment, more than one type of agent may be coupled to one antibody. Regardless of the particular embodiment, immunoconjugates with more than one agent may be prepared in a variety of ways. For example, more than one agent may be coupled directly to an antibody molecule, or linkers which provide multiple sites for attachment can be used. Alternatively, a carrier can be used.

A carrier may bear the agents in a variety of ways, including covalent bonding either directly or via a linker group. Suitable carriers include proteins such as albumins (*e.g.*, U.S. Patent No. 4,507,234, to Kato et al.), peptides and polysaccharides such as aminodextran (*e.g.*, U.S. Patent No. 4,699,784, to Shih et al.). A carrier may also bear an agent by noncovalent bonding or by encapsulation, such as within a liposome vesicle (*e.g.*, U.S. Patent Nos. 4,429,008 and 4,873,088). Carriers specific for radionuclide agents include radiohalogenated small molecules and chelating compounds. For example, U.S. Patent No. 4,735,792 discloses representative radiohalogenated small molecules and their synthesis. A radionuclide chelate may be formed from chelating compounds that include those containing nitrogen and sulfur atoms as the donor atoms for binding the metal, or metal oxide, radionuclide. For example, U.S. Patent No. 4,673,562, to Davison et al. discloses representative chelating compounds and their synthesis.

A variety of routes of administration for the antibodies and immunoconjugates may be used. Typically, administration will be intravenous, intramuscular, subcutaneous or in the bed of a resected tumor. It will be evident that the precise dose of the antibody/immunoconjugate will vary depending upon the antibody used, the antigen density on the tumor, and the rate of clearance of the antibody.

Also provided herein are anti-idiotypic antibodies that mimic an immunogenic portion of an ovarian carcinoma protein. Such antibodies may be raised against an antibody, or antigen-binding fragment thereof, that specifically binds to an

immunogenic portion of an ovarian carcinoma protein, using well known techniques. Anti-idiotypic antibodies that mimic an immunogenic portion of an ovarian carcinoma protein are those antibodies that bind to an antibody, or antigen-binding fragment thereof, that specifically binds to an immunogenic portion of an ovarian carcinoma
5 protein, as described herein.

T CELLS

Immunotherapeutic compositions may also, or alternatively, comprise T cells specific for an ovarian carcinoma protein. Such cells may generally be prepared *in*
10 *vitro* or *ex vivo*, using standard procedures. For example, T cells may be present within (or isolated from) bone marrow, peripheral blood or a fraction of bone marrow or peripheral blood of a mammal, such as a patient, using a commercially available cell separation system, such as the CEPRATE™ system, available from CellPro Inc., Bothell WA (see also U.S. Patent No. 5,240,856; U.S. Patent No. 5,215,926; WO
15 89/06280; WO 91/16116 and WO 92/07243). Alternatively, T cells may be derived from related or unrelated humans, non-human animals, cell lines or cultures.

T cells may be stimulated with an ovarian carcinoma polypeptide, polynucleotide encoding an ovarian carcinoma polypeptide and/or an antigen presenting cell (APC) that expresses such a polypeptide. Such stimulation is performed under
20 conditions and for a time sufficient to permit the generation of T cells that are specific for the polypeptide. Preferably, an ovarian carcinoma polypeptide or polynucleotide is present within a delivery vehicle, such as a microsphere, to facilitate the generation of specific T cells.

T cells are considered to be specific for an ovarian carcinoma
25 polypeptide if the T cells kill target cells coated with an ovarian carcinoma polypeptide or expressing a gene encoding such a polypeptide. T cell specificity may be evaluated using any of a variety of standard techniques. For example, within a chromium release assay or proliferation assay, a stimulation index of more than two fold increase in lysis and/or proliferation, compared to negative controls, indicates T cell specificity. Such
30 assays may be performed, for example, as described in Chen et al., *Cancer Res.* 54:1065-1070, 1994. Alternatively, detection of the proliferation of T cells may be

accomplished by a variety of known techniques. For example, T cell proliferation can be detected by measuring an increased rate of DNA synthesis (*e.g.*, by pulse-labeling cultures of T cells with tritiated thymidine and measuring the amount of tritiated thymidine incorporated into DNA). Contact with an ovarian carcinoma polypeptide (200 ng/ml - 100 µg/ml, preferably 100 ng/ml - 25 µg/ml) for 3 - 7 days should result in at least a two fold increase in proliferation of the T cells and/or contact as described above for 2-3 hours should result in activation of the T cells, as measured using standard cytokine assays in which a two fold increase in the level of cytokine release (*e.g.*, TNF or IFN-γ) is indicative of T cell activation (*see* Coligan et al., Current Protocols in Immunology, vol. 1, Wiley Interscience (Greene 1998). T cells that have been activated in response to an ovarian carcinoma polypeptide, polynucleotide or ovarian carcinoma polypeptide-expressing APC may be CD4⁺ and/or CD8⁺. Ovarian carcinoma polypeptide-specific T cells may be expanded using standard techniques. Within preferred embodiments, the T cells are derived from a patient or a related or unrelated donor and are administered to the patient following stimulation and expansion.

For therapeutic purposes, CD4⁺ or CD8⁺ T cells that proliferate in response to an ovarian carcinoma polypeptide, polynucleotide or APC can be expanded in number either *in vitro* or *in vivo*. Proliferation of such T cells *in vitro* may be accomplished in a variety of ways. For example, the T cells can be re-exposed to an ovarian carcinoma polypeptide, with or without the addition of T cell growth factors, such as interleukin-2, and/or stimulator cells that synthesize an ovarian carcinoma polypeptide. Alternatively, one or more T cells that proliferate in the presence of an ovarian carcinoma polypeptide can be expanded in number by cloning. Methods for cloning cells are well known in the art, and include limiting dilution. Following expansion, the cells may be administered back to the patient as described, for example, by Chang et al., *Crit. Rev. Oncol. Hematol.* 22:213, 1996.

PHARMACEUTICAL COMPOSITIONS AND VACCINES

Within certain aspects, polypeptides, polynucleotides, binding agents and/or immune system cells as described herein may be incorporated into

pharmaceutical compositions or vaccines. Pharmaceutical compositions comprise one or more such compounds or cells and a physiologically acceptable carrier. Vaccines may comprise one or more such compounds or cells and a non-specific immune response enhancer. A non-specific immune response enhancer may be any substance
5 that enhances an immune response to an exogenous antigen. Examples of non-specific immune response enhancers include adjuvants, biodegradable microspheres (*e.g.*, polylactic galactide) and liposomes (into which the compound is incorporated; *see e.g.*, Fullerton, U.S. Patent No. 4,235,877). Vaccine preparation is generally described in, for example, M.F. Powell and M.J. Newman, eds., "Vaccine Design (the subunit and
10 adjuvant approach)," Plenum Press (NY, 1995). Pharmaceutical compositions and vaccines within the scope of the present invention may also contain other compounds, which may be biologically active or inactive. For example, one or more immunogenic portions of other tumor antigens may be present, either incorporated into a fusion polypeptide or as a separate compound within the composition or vaccine.

15 A pharmaceutical composition or vaccine may contain DNA encoding one or more of the polypeptides as described above, such that the polypeptide is generated *in situ*. As noted above, the DNA may be present within any of a variety of delivery systems known to those of ordinary skill in the art, including nucleic acid expression systems, bacteria and viral expression systems. Appropriate nucleic acid
20 expression systems contain the necessary DNA sequences for expression in the patient (such as a suitable promoter and terminating signal). Bacterial delivery systems involve the administration of a bacterium (such as *Bacillus-Calmette-Guerrin*) that expresses an immunogenic portion of the polypeptide on its cell surface. In a preferred embodiment, the DNA may be introduced using a viral expression system (*e.g.*, vaccinia or other pox
25 virus, retrovirus, or adenovirus), which may involve the use of a non-pathogenic (defective), replication competent virus. Suitable systems are disclosed, for example, in Fisher-Hoch et al., *PNAS* 86:317-321, 1989; Flexner et al., *Ann. N.Y. Acad. Sci.* 569:86-103, 1989; Flexner et al., *Vaccine* 8:17-21, 1990; U.S. Patent Nos. 4,603,112, 4,769,330, and 5,017,487; WO 89/01973; U.S. Patent No. 4,777,127; GB 2,200,651;
30 EP 0,345,242; WO 91/02805; Berkner, *Biotechniques* 6:616-627, 1988; Rosenfeld et al., *Science* 252:431-434, 1991; Kolls et al., *PNAS* 91:215-219, 1994; Kass-Eisler et al.,

PNAS 90:11498-11502, 1993; Guzman et al., *Circulation* 88:2838-2848, 1993; and Guzman et al., *Cir. Res.* 73:1202-1207, 1993. Techniques for incorporating DNA into such expression systems are well known to those of ordinary skill in the art. The DNA may also be "naked," as described, for example, in Ulmer et al., *Science* 259:1745-1749, 5 1993 and reviewed by Cohen, *Science* 259:1691-1692, 1993. The uptake of naked DNA may be increased by coating the DNA onto biodegradable beads, which are efficiently transported into the cells.

While any suitable carrier known to those of ordinary skill in the art may be employed in the pharmaceutical compositions of this invention, the type of carrier 10 will vary depending on the mode of administration. Compositions of the present invention may be formulated for any appropriate manner of administration, including for example, topical, oral, nasal, intravenous, intracranial, intraperitoneal, subcutaneous or intramuscular administration. For parenteral administration, such as subcutaneous injection, the carrier preferably comprises water, saline, alcohol, a fat, a wax or a buffer. 15 For oral administration, any of the above carriers or a solid carrier, such as mannitol, lactose, starch, magnesium stearate, sodium saccharine, talcum, cellulose, glucose, sucrose, and magnesium carbonate, may be employed. Biodegradable microspheres (e.g., polylactate polyglycolate) may also be employed as carriers for the pharmaceutical compositions of this invention. Suitable biodegradable microspheres 20 are disclosed, for example, in U.S. Patent Nos. 4,897,268 and 5,075,109.

Such compositions may also comprise buffers (e.g., neutral buffered saline or phosphate buffered saline), carbohydrates (e.g., glucose, mannose, sucrose or dextran), mannitol, proteins, polypeptides or amino acids such as glycine, antioxidants, chelating agents such as EDTA or glutathione, adjuvants (e.g., aluminum hydroxide) 25 and/or preservatives. Alternatively, compositions of the present invention may be formulated as a lyophilizate. Compounds may also be encapsulated within liposomes using well known technology.

Any of a variety of non-specific immune response enhancers may be employed in the vaccines of this invention. For example, an adjuvant may be included. 30 Most adjuvants contain a substance designed to protect the antigen from rapid catabolism, such as aluminum hydroxide or mineral oil, and a stimulator of immune

responses, such as lipid A, *Bordetella pertussis* or *Mycobacterium tuberculosis* derived proteins. Suitable adjuvants are commercially available as, for example, Freund's Incomplete Adjuvant and Complete Adjuvant (Difco Laboratories, Detroit, MI), Merck Adjuvant 65 (Merck and Company, Inc., Rahway, NJ), alum, biodegradable
5 microspheres, monophosphoryl lipid A and quil A. Cytokines, such as GM-CSF or interleukin-2, -7, or -12, may also be used as adjuvants.

Within the vaccines provided herein, the adjuvant composition is preferably designed to induce an immune response predominantly of the Th1 type. High levels of Th1-type cytokines (*e.g.*, IFN- γ , IL-2 and IL-12) tend to favor the
10 induction of cell mediated immune responses to an administered antigen. In contrast, high levels of Th2-type cytokines (*e.g.*, IL-4, IL-5, IL-6, IL-10 and TNF- β) tend to favor the induction of humoral immune responses. Following application of a vaccine as provided herein, a patient will support an immune response that includes Th1- and Th2-type responses. Within a preferred embodiment, in which a response is
15 predominantly Th1-type, the level of Th1-type cytokines will increase to a greater extent than the level of Th2-type cytokines. The levels of these cytokines may be readily assessed using standard assays. For a review of the families of cytokines, see Mosmann and Coffman, *Ann. Rev. Immunol.* 7:145-173, 1989.

Preferred adjuvants for use in eliciting a predominantly Th1-type
20 response include, for example, a combination of monophosphoryl lipid A, preferably 3-de-O-acylated monophosphoryl lipid A (3D-MPL), together with an aluminum salt. MPL adjuvants are available from Ribi ImmunoChem Research Inc. (Hamilton, MT; *see* US Patent Nos. 4,436,727; 4,877,611; 4,866,034 and 4,912,094). Also preferred is AS-2 (SmithKline Beecham). CpG-containing oligonucleotides (in which the CpG
25 dinucleotide is unmethylated) also induce a predominantly Th1 response. Such oligonucleotides are well known and are described, for example, in WO 96/02555. Another preferred adjuvant is a saponin, preferably QS21, which may be used alone or in combination with other adjuvants. For example, an enhanced system involves the combination of a monophosphoryl lipid A and saponin derivative, such as the
30 combination of QS21 and 3D-MPL as described in WO 94/00153, or a less reactogenic composition where the QS21 is quenched with cholesterol, as described in WO

96/33739. Other preferred formulations comprises an oil-in-water emulsion and tocopherol. A particularly potent adjuvant formulation involving QS21, 3D-MPL and tocopherol in an oil-in-water emulsion is described in WO 95/17210. Any vaccine provided herein may be prepared using well known methods that result in a combination of antigen, immune response enhancer and a suitable carrier or excipient.

The compositions described herein may be administered as part of a sustained release formulation (*i.e.*, a formulation such as a capsule or sponge that effects a slow release of compound following administration). Such formulations may generally be prepared using well known technology and administered by, for example, oral, rectal or subcutaneous implantation, or by implantation at the desired target site. Sustained-release formulations may contain a polypeptide, polynucleotide or antibody dispersed in a carrier matrix and/or contained within a reservoir surrounded by a rate controlling membrane. Carriers for use within such formulations are biocompatible, and may also be biodegradable; preferably the formulation provides a relatively constant level of active component release. The amount of active compound contained within a sustained release formulation depends upon the site of implantation, the rate and expected duration of release and the nature of the condition to be treated or prevented.

Any of a variety of delivery vehicles may be employed within pharmaceutical compositions and vaccines to facilitate production of an antigen-specific immune response that targets tumor cells. Delivery vehicles include antigen presenting cells (APCs), such as dendritic cells, macrophages, B cells, monocytes and other cells that may be engineered to be efficient APCs. Such cells may, but need not, be genetically modified to increase the capacity for presenting the antigen, to improve activation and/or maintenance of the T cell response, to have anti-tumor effects *per se* and/or to be immunologically compatible with the receiver (*i.e.*, matched HLA haplotype). APCs may generally be isolated from any of a variety of biological fluids and organs, including tumor and peritumoral tissues, and may be autologous, allogeneic, syngeneic or xenogeneic cells.

Certain preferred embodiments of the present invention use dendritic cells or progenitors thereof as antigen-presenting cells. Dendritic cells are highly potent

APCs (Banchereau and Steinman, *Nature* 392:245-251, 1998) and have been shown to be effective as a physiological adjuvant for eliciting prophylactic or therapeutic antitumor immunity (see Timmerman and Levy, *Ann. Rev. Med.* 50:507-529, 1999). In general, dendritic cells may be identified based on their typical shape (stellate *in situ*,
5 with marked cytoplasmic processes (dendrites) visible *in vitro*) and based on the lack of differentiation markers of B cells (CD19 and CD20), T cells (CD3), monocytes (CD14) and natural killer cells (CD56), as determined using standard assays. Dendritic cells may, of course, be engineered to express specific cell-surface receptors or ligands that are not commonly found on dendritic cells *in vivo* or *ex vivo*, and such modified
10 dendritic cells are contemplated by the present invention. As an alternative to dendritic cells, secreted vesicles antigen-loaded dendritic cells (called exosomes) may be used within a vaccine (see Zitvogel et al., *Nature Med.* 4:594-600, 1998).

Dendritic cells and progenitors may be obtained from peripheral blood, bone marrow, tumor-infiltrating cells, peritumoral tissues-infiltrating cells, lymph
15 nodes, spleen, skin, umbilical cord blood or any other suitable tissue or fluid. For example, dendritic cells may be differentiated *ex vivo* by adding a combination of cytokines such as GM-CSF, IL-4, IL-13 and/or TNF α to cultures of monocytes harvested from peripheral blood. Alternatively, CD34 positive cells harvested from peripheral blood, umbilical cord blood or bone marrow may be differentiated into
20 dendritic cells by adding to the culture medium combinations of GM-CSF, IL-3, TNF α , CD40 ligand, LPS, flt3-ligand and/or other compound(s) that induce maturation and proliferation of dendritic cells.

Dendritic cells are conveniently categorized as "immature" and "mature" cells, which allows a simple way to discriminate between two well characterized
25 phenotypes. However, this nomenclature should not be construed to exclude all possible intermediate stages of differentiation. Immature dendritic cells are characterized as APC with a high capacity for antigen uptake and processing, which correlates with the high expression of Fc γ receptor, mannose receptor and DEC-205 marker. The mature phenotype is typically characterized by a lower expression of these
30 markers, but a high expression of cell surface molecules responsible for T cell

activation such as class I and class II MHC, adhesion molecules (*e.g.*, CD54 and CD11) and costimulatory molecules (*e.g.*, CD40, CD80 and CD86).

APCs may generally be transfected with a polynucleotide encoding a ovarian carcinoma antigen (or portion or other variant thereof) such that the antigen, or
5 an immunogenic portion thereof, is expressed on the cell surface. Such transfection may take place *ex vivo*, and a composition or vaccine comprising such transfected cells may then be used for therapeutic purposes, as described herein. Alternatively, a gene delivery vehicle that targets a dendritic or other antigen presenting cell may be administered to a patient, resulting in transfection that occurs *in vivo*. *In vivo* and *ex*
10 *vivo* transfection of dendritic cells, for example, may generally be performed using any methods known in the art, such as those described in WO 97/24447, or the gene gun approach described by Mahvi et al., *Immunology and cell Biology* 75:456-460, 1997. Antigen loading of dendritic cells may be achieved by incubating dendritic cells or progenitor cells with the polypeptide, DNA (naked or within a plasmid vector) or RNA;
15 or with antigen-expressing recombinant bacterium or viruses (*e.g.*, vaccinia, fowlpox, adenovirus or lentivirus vectors). Prior to loading, the polypeptide may be covalently conjugated to an immunological partner that provides T cell help (*e.g.*, a carrier molecule). Alternatively, a dendritic cell may be pulsed with a non-conjugated immunological partner, separately or in the presence of the polypeptide.

20

CANCER THERAPY

In further aspects of the present invention, the compositions described herein may be used for immunotherapy of cancer, such as ovarian cancer. Within such methods, pharmaceutical compositions and vaccines are typically administered to a
25 patient. As used herein, a "patient" refers to any warm-blooded animal, preferably a human. A patient may or may not be afflicted with cancer. Accordingly, the above pharmaceutical compositions and vaccines may be used to prevent the development of a cancer or to treat a patient afflicted with a cancer. Within certain preferred embodiments, a patient is afflicted with ovarian cancer. Such cancer may be diagnosed
30 using criteria generally accepted in the art, including the presence of a malignant tumor. Pharmaceutical compositions and vaccines may be administered either prior to or

following surgical removal of primary tumors and/or treatment such as administration of radiotherapy or conventional chemotherapeutic drugs.

Within certain embodiments, immunotherapy may be active immunotherapy, in which treatment relies on the *in vivo* stimulation of the endogenous host immune system to react against tumors with the administration of immune response-modifying agents (such as tumor vaccines, bacterial adjuvants and/or cytokines).

Within other embodiments, immunotherapy may be passive immunotherapy, in which treatment involves the delivery of agents with established tumor-immune reactivity (such as effector cells or antibodies) that can directly or indirectly mediate antitumor effects and does not necessarily depend on an intact host immune system. Examples of effector cells include T lymphocytes (such as CD8⁺ cytotoxic T lymphocytes and CD4⁺ T-helper tumor-infiltrating lymphocytes), killer cells (such as Natural Killer cells and lymphokine-activated killer cells), B cells and antigen-presenting cells (such as dendritic cells and macrophages) expressing a polypeptide provided herein. T cell receptors and antibody receptors specific for the polypeptides recited herein may be cloned, expressed and transferred into other vectors or effector cells for adoptive immunotherapy. The polypeptides provided herein may also be used to generate antibodies or anti-idiotypic antibodies (as described above and in U.S. Patent No. 4,918,164) for passive immunotherapy.

Effector cells may generally be obtained in sufficient quantities for adoptive immunotherapy by growth *in vitro*, as described herein. Culture conditions for expanding single antigen-specific effector cells to several billion in number with retention of antigen recognition *in vivo* are well known in the art. Such *in vitro* culture conditions typically use intermittent stimulation with antigen, often in the presence of cytokines (such as IL-2) and non-dividing feeder cells. As noted above, immunoreactive polypeptides as provided herein may be used to rapidly expand antigen-specific T cell cultures in order to generate a sufficient number of cells for immunotherapy. In particular, antigen-presenting cells, such as dendritic, macrophage or B cells, may be pulsed with immunoreactive polypeptides or transfected with one or more polynucleotides using standard techniques well known in the art. For example,

antigen-presenting cells can be transfected with a polynucleotide having a promoter appropriate for increasing expression in a recombinant virus or other expression system. Cultured effector cells for use in therapy must be able to grow and distribute widely, and to survive long term *in vivo*. Studies have shown that cultured effector cells can be
5 induced to grow *in vivo* and to survive long term in substantial numbers by repeated stimulation with antigen supplemented with IL-2 (*see*, for example, Cheever et al., *Immunological Reviews* 157:177, 1997).

Alternatively, a vector expressing a polypeptide recited herein may be introduced into stem cells taken from a patient and clonally propagated *in vitro* for
10 autologous transplant back into the same patient.

Routes and frequency of administration, as well as dosage, will vary from individual to individual, and may be readily established using standard techniques. In general, the pharmaceutical compositions and vaccines may be administered by injection (*e.g.*, intracutaneous, intramuscular, intravenous or subcutaneous), intranasally
15 (*e.g.*, by aspiration), orally or in the bed of a resected tumor. Preferably, between 1 and 10 doses may be administered over a 52 week period. Preferably, 6 doses are administered, at intervals of 1 month, and booster vaccinations may be given periodically thereafter. Alternate protocols may be appropriate for individual patients. A suitable dose is an amount of a compound that, when administered as described
20 above, is capable of promoting an anti-tumor immune response, and is at least 10-50% above the basal (*i.e.*, untreated) level. Such response can be monitored by measuring the anti-tumor antibodies in a patient or by vaccine-dependent generation of cytolytic effector cells capable of killing the patient's tumor cells *in vitro*. Such vaccines should also be capable of causing an immune response that leads to an improved clinical
25 outcome (*e.g.*, more frequent remissions, complete or partial or longer disease-free survival) in vaccinated patients as compared to non-vaccinated patients. In general, for pharmaceutical compositions and vaccines comprising one or more polypeptides, the amount of each polypeptide present in a dose ranges from about 100 μ g to 5 mg per kg of host. Suitable dose sizes will vary with the size of the patient, but will typically
30 range from about 0.1 mL to about 5 mL.

In general, an appropriate dosage and treatment regimen provides the active compound(s) in an amount sufficient to provide therapeutic and/or prophylactic benefit. Such a response can be monitored by establishing an improved clinical outcome (e.g., more frequent remissions, complete or partial, or longer disease-free survival) in treated patients as compared to non-treated patients. Increases in preexisting immune responses to an ovarian carcinoma antigen generally correlate with an improved clinical outcome. Such immune responses may generally be evaluated using standard proliferation, cytotoxicity or cytokine assays, which may be performed using samples obtained from a patient before and after treatment.

10

SCREENS FOR IDENTIFYING SECRETED OVARIAN CARCINOMA ANTIGENS

The present invention provides methods for identifying secreted tumor antigens. Within such methods, tumors are implanted into immunodeficient animals such as SCID mice and maintained for a time sufficient to permit secretion of tumor antigens into serum. In general, tumors may be implanted subcutaneously or within the gonadal fat pad of an immunodeficient animal and maintained for 1-9 months, preferably 1-4 months. Implantation may generally be performed as described in WO 97/18300. The serum containing secreted antigens is then used to prepare antisera in immunocompetent mice, using standard techniques and as described herein. Briefly, 50-100 μ L of sera (pooled from three sets of immunodeficient mice, each set bearing a different SCID-derived human ovarian tumor) may be mixed 1:1 (vol:vol) with an appropriate adjuvant, such as RIBI-MPL or MPL + TDM (Sigma Chemical Co., St. Louis, MO) and injected intraperitoneally into syngeneic immunocompetent animals at monthly intervals for a total of 5 months. Antisera from animals immunized in such a manner may be obtained by drawing blood after the third, fourth and fifth immunizations. The resulting antiserum is generally pre-cleared of *E. coli* and phage antigens and used (generally following dilution, such as 1:200) in a serological expression screen.

The library is typically an expression library containing cDNAs from one or more tumors of the type that was implanted into SCID mice. This expression library may be prepared in any suitable vector, such as λ -screen (Novagen). cDNAs that

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encode a polypeptide that reacts with the antiserum may be identified using standard techniques, and sequenced. Such cDNA molecules may be further characterized to evaluate expression in tumor and normal tissue, and to evaluate antigen secretion in patients.

5 The methods provided herein have advantages over other methods for tumor antigen discovery. In particular, all antigens identified by such methods should be secreted or released through necrosis of the tumor cells. Such antigens may be present on the surface of tumor cells for an amount of time sufficient to permit targeting and killing by the immune system, following vaccination.

10

METHODS FOR DETECTING CANCER

In general, a cancer may be detected in a patient based on the presence of one or more ovarian carcinoma proteins and/or polynucleotides encoding such proteins in a biological sample (such as blood, sera, urine and/or tumor biopsies) obtained from
15 the patient. In other words, such proteins may be used as markers to indicate the presence or absence of a cancer such as ovarian cancer. In addition, such proteins may be useful for the detection of other cancers. The binding agents provided herein generally permit detection of the level of protein that binds to the agent in the biological sample. Polynucleotide primers and probes may be used to detect the level of mRNA
20 encoding a tumor protein, which is also indicative of the presence or absence of a cancer. In general, an ovarian carcinoma-associated sequence should be present at a level that is at least three fold higher in tumor tissue than in normal tissue

There are a variety of assay formats known to those of ordinary skill in the art for using a binding agent to detect polypeptide markers in a sample. See, e.g.,
25 Harlow and Lane, *Antibodies: A Laboratory Manual*, Cold Spring Harbor Laboratory, 1988. In general, the presence or absence of a cancer in a patient may be determined by (a) contacting a biological sample obtained from a patient with a binding agent; (b) detecting in the sample a level of polypeptide that binds to the binding agent; and (c) comparing the level of polypeptide with a predetermined cut-off value.

30 In a preferred embodiment, the assay involves the use of binding agent immobilized on a solid support to bind to and remove the polypeptide from the

remainder of the sample. The bound polypeptide may then be detected using a detection reagent that contains a reporter group and specifically binds to the binding agent/polypeptide complex. Such detection reagents may comprise, for example, a binding agent that specifically binds to the polypeptide or an antibody or other agent that specifically binds to the binding agent, such as an anti-immunoglobulin, protein G, protein A or a lectin. Alternatively, a competitive assay may be utilized, in which a polypeptide is labeled with a reporter group and allowed to bind to the immobilized binding agent after incubation of the binding agent with the sample. The extent to which components of the sample inhibit the binding of the labeled polypeptide to the binding agent is indicative of the reactivity of the sample with the immobilized binding agent. Suitable polypeptides for use within such assays include full length ovarian carcinoma proteins and portions thereof to which the binding agent binds, as described above.

The solid support may be any material known to those of ordinary skill in the art to which the tumor protein may be attached. For example, the solid support may be a test well in a microtiter plate or a nitrocellulose or other suitable membrane. Alternatively, the support may be a bead or disc, such as glass, fiberglass, latex or a plastic material such as polystyrene or polyvinylchloride. The support may also be a magnetic particle or a fiber optic sensor, such as those disclosed, for example, in U.S. Patent No. 5,359,681. The binding agent may be immobilized on the solid support using a variety of techniques known to those of skill in the art, which are amply described in the patent and scientific literature. In the context of the present invention, the term "immobilization" refers to both noncovalent association, such as adsorption, and covalent attachment (which may be a direct linkage between the agent and functional groups on the support or may be a linkage by way of a cross-linking agent). Immobilization by adsorption to a well in a microtiter plate or to a membrane is preferred. In such cases, adsorption may be achieved by contacting the binding agent, in a suitable buffer, with the solid support for a suitable amount of time. The contact time varies with temperature, but is typically between about 1 hour and about 1 day. In general, contacting a well of a plastic microtiter plate (such as polystyrene or polyvinylchloride) with an amount of binding agent ranging from about 10 ng to about

10 μg , and preferably about 100 ng to about 1 μg , is sufficient to immobilize an adequate amount of binding agent.

Covalent attachment of binding agent to a solid support may generally be achieved by first reacting the support with a bifunctional reagent that will react with
5 both the support and a functional group, such as a hydroxyl or amino group, on the binding agent. For example, the binding agent may be covalently attached to supports having an appropriate polymer coating using benzoquinone or by condensation of an aldehyde group on the support with an amine and an active hydrogen on the binding partner (*see, e.g.,* Pierce Immunotechnology Catalog and Handbook, 1991, at
10 A12-A13).

In certain embodiments, the assay is a two-antibody sandwich assay. This assay may be performed by first contacting an antibody that has been immobilized on a solid support, commonly the well of a microtiter plate, with the sample, such that polypeptides within the sample are allowed to bind to the immobilized antibody.
15 Unbound sample is then removed from the immobilized polypeptide-antibody complexes and a detection reagent (preferably a second antibody capable of binding to a different site on the polypeptide) containing a reporter group is added. The amount of detection reagent that remains bound to the solid support is then determined using a method appropriate for the specific reporter group.

20 More specifically, once the antibody is immobilized on the support as described above, the remaining protein binding sites on the support are typically blocked. Any suitable blocking agent known to those of ordinary skill in the art, such as bovine serum albumin or Tween 20™ (Sigma Chemical Co., St. Louis, MO). The immobilized antibody is then incubated with the sample, and polypeptide is allowed to
25 bind to the antibody. The sample may be diluted with a suitable diluent, such as phosphate-buffered saline (PBS) prior to incubation. In general, an appropriate contact time (*i.e.,* incubation time) is a period of time that is sufficient to detect the presence of polypeptide within a sample obtained from an individual with ovarian cancer. Preferably, the contact time is sufficient to achieve a level of binding that is at least
30 about 95% of that achieved at equilibrium between bound and unbound polypeptide. Those of ordinary skill in the art will recognize that the time necessary to achieve

equilibrium may be readily determined by assaying the level of binding that occurs over a period of time. At room temperature, an incubation time of about 30 minutes is generally sufficient.

Unbound sample may then be removed by washing the solid support
5 with an appropriate buffer, such as PBS containing 0.1% Tween 20™. The second antibody, which contains a reporter group, may then be added to the solid support. Preferred reporter groups include those groups recited above.

The detection reagent is then incubated with the immobilized antibody-polypeptide complex for an amount of time sufficient to detect the bound polypeptide.
10 An appropriate amount of time may generally be determined by assaying the level of binding that occurs over a period of time. Unbound detection reagent is then removed and bound detection reagent is detected using the reporter group. The method employed for detecting the reporter group depends upon the nature of the reporter group. For radioactive groups, scintillation counting or autoradiographic methods are
15 generally appropriate. Spectroscopic methods may be used to detect dyes, luminescent groups and fluorescent groups. Biotin may be detected using avidin, coupled to a different reporter group (commonly a radioactive or fluorescent group or an enzyme). Enzyme reporter groups may generally be detected by the addition of substrate (generally for a specific period of time), followed by spectroscopic or other analysis of
20 the reaction products.

To determine the presence or absence of a cancer, such as ovarian cancer, the signal detected from the reporter group that remains bound to the solid support is generally compared to a signal that corresponds to a predetermined cut-off value. In one preferred embodiment, the cut-off value for the detection of a cancer is
25 the average mean signal obtained when the immobilized antibody is incubated with samples from patients without the cancer. In general, a sample generating a signal that is three standard deviations above the predetermined cut-off value is considered positive for the cancer. In an alternate preferred embodiment, the cut-off value is determined using a Receiver Operator Curve, according to the method of Sackett et al., *Clinical*
30 *Epidemiology: A Basic Science for Clinical Medicine*, Little Brown and Co., 1985, p. 106-7. Briefly, in this embodiment, the cut-off value may be determined from a plot

of pairs of true positive rates (*i.e.*, sensitivity) and false positive rates (100%-specificity) that correspond to each possible cut-off value for the diagnostic test result. The cut-off value on the plot that is the closest to the upper left-hand corner (*i.e.*, the value that encloses the largest area) is the most accurate cut-off value, and a sample generating a
5 signal that is higher than the cut-off value determined by this method may be considered positive. Alternatively, the cut-off value may be shifted to the left along the plot, to minimize the false positive rate, or to the right, to minimize the false negative rate. In general, a sample generating a signal that is higher than the cut-off value determined by this method is considered positive for a cancer.

10 In a related embodiment, the assay is performed in a flow-through or strip test format, wherein the binding agent is immobilized on a membrane, such as nitrocellulose. In the flow-through test, polypeptides within the sample bind to the immobilized binding agent as the sample passes through the membrane. A second, labeled binding agent then binds to the binding agent-polypeptide complex as a solution
15 containing the second binding agent flows through the membrane. The detection of bound second binding agent may then be performed as described above. In the strip test format, one end of the membrane to which binding agent is bound is immersed in a solution containing the sample. The sample migrates along the membrane through a region containing second binding agent and to the area of immobilized binding agent.
20 Concentration of second binding agent at the area of immobilized antibody indicates the presence of a cancer. Typically, the concentration of second binding agent at that site generates a pattern, such as a line, that can be read visually. The absence of such a pattern indicates a negative result. In general, the amount of binding agent immobilized on the membrane is selected to generate a visually discernible pattern when the
25 biological sample contains a level of polypeptide that would be sufficient to generate a positive signal in the two-antibody sandwich assay, in the format discussed above. Preferred binding agents for use in such assays are antibodies and antigen-binding fragments thereof. Preferably, the amount of antibody immobilized on the membrane ranges from about 25 ng to about 1 μ g, and more preferably from about 50 ng to about
30 500 ng. Such tests can typically be performed with a very small amount of biological sample.

Of course, numerous other assay protocols exist that are suitable for use with the tumor proteins or binding agents of the present invention. The above descriptions are intended to be exemplary only. For example, it will be apparent to those of ordinary skill in the art that the above protocols may be readily modified to use
5 ovarian carcinoma polypeptides to detect antibodies that bind to such polypeptides in a biological sample. The detection of such ovarian carcinoma protein specific antibodies may correlate with the presence of a cancer.

A cancer may also, or alternatively, be detected based on the presence of T cells that specifically react with an ovarian carcinoma protein in a biological sample.
10 Within certain methods, a biological sample comprising CD4⁺ and/or CD8⁺ T cells isolated from a patient is incubated with an ovarian carcinoma protein, a polynucleotide encoding such a polypeptide and/or an APC that expresses at least an immunogenic portion of such a polypeptide, and the presence or absence of specific activation of the T cells is detected. Suitable biological samples include, but are not limited to, isolated
15 T cells. For example, T cells may be isolated from a patient by routine techniques (such as by Ficoll/Hypaque density gradient centrifugation of peripheral blood lymphocytes). T cells may be incubated *in vitro* for 2-9 days (typically 4 days) at 37°C with an ovarian carcinoma protein (*e.g.*, 5 - 25 µg/ml). It may be desirable to incubate another aliquot of a T cell sample in the absence of ovarian carcinoma protein to serve as a control. For
20 CD4⁺ T cells, activation is preferably detected by evaluating proliferation of the T cells. For CD8⁺ T cells, activation is preferably detected by evaluating cytolytic activity. A level of proliferation that is at least two fold greater and/or a level of cytolytic activity that is at least 20% greater than in disease-free patients indicates the presence of a cancer in the patient.

25 As noted above, a cancer may also, or alternatively, be detected based on the level of mRNA encoding an ovarian carcinoma protein in a biological sample. For example, at least two oligonucleotide primers may be employed in a polymerase chain reaction (PCR) based assay to amplify a portion of an ovarian carcinoma protein cDNA derived from a biological sample, wherein at least one of the oligonucleotide primers is
30 specific for (*i.e.*, hybridizes to) a polynucleotide encoding the ovarian carcinoma protein. The amplified cDNA is then separated and detected using techniques well

known in the art, such as gel electrophoresis. Similarly, oligonucleotide probes that specifically hybridize to a polynucleotide encoding an ovarian carcinoma protein may be used in a hybridization assay to detect the presence of polynucleotide encoding the tumor protein in a biological sample.

5 To permit hybridization under assay conditions, oligonucleotide primers and probes should comprise an oligonucleotide sequence that has at least about 60%, preferably at least about 75% and more preferably at least about 90%, identity to a portion of a polynucleotide encoding an ovarian carcinoma protein that is at least 10 nucleotides, and preferably at least 20 nucleotides, in length. Preferably,
10 oligonucleotide primers and/or probes hybridize to a polynucleotide encoding a polypeptide described herein under moderately stringent conditions, as defined above. Oligonucleotide primers and/or probes which may be usefully employed in the diagnostic methods described herein preferably are at least 10-40 nucleotides in length. In a preferred embodiment, the oligonucleotide primers comprise at least 10 contiguous
15 nucleotides, more preferably at least 15 contiguous nucleotides, of a DNA molecule having a sequence provided herein. Techniques for both PCR based assays and hybridization assays are well known in the art (*see*, for example, Mullis et al., *Cold Spring Harbor Symp. Quant. Biol.*, 51:263, 1987; Erlich ed., *PCR Technology*, Stockton Press, NY, 1989).

20 One preferred assay employs RT-PCR, in which PCR is applied in conjunction with reverse transcription. Typically, RNA is extracted from a biological sample such as a biopsy tissue and is reverse transcribed to produce cDNA molecules. PCR amplification using at least one specific primer generates a cDNA molecule, which may be separated and visualized using, for example, gel electrophoresis. Amplification
25 may be performed on biological samples taken from a test patient and from an individual who is not afflicted with a cancer. The amplification reaction may be performed on several dilutions of cDNA spanning two orders of magnitude. A two-fold or greater increase in expression in several dilutions of the test patient sample as compared to the same dilutions of the non-cancerous sample is typically considered
30 positive.

In another embodiment, ovarian carcinoma proteins and polynucleotides encoding such proteins may be used as markers for monitoring the progression of cancer. In this embodiment, assays as described above for the diagnosis of a cancer may be performed over time, and the change in the level of reactive polypeptide(s) evaluated. For example, the assays may be performed every 24-72 hours for a period of 6 months to 1 year, and thereafter performed as needed. In general, a cancer is progressing in those patients in whom the level of polypeptide detected by the binding agent increases over time. In contrast, the cancer is not progressing when the level of reactive polypeptide either remains constant or decreases with time.

Certain *in vivo* diagnostic assays may be performed directly on a tumor. One such assay involves contacting tumor cells with a binding agent. The bound binding agent may then be detected directly or indirectly via a reporter group. Such binding agents may also be used in histological applications. Alternatively, polynucleotide probes may be used within such applications.

As noted above, to improve sensitivity, multiple ovarian carcinoma protein markers may be assayed within a given sample. It will be apparent that binding agents specific for different proteins provided herein may be combined within a single assay. Further, multiple primers or probes may be used concurrently. The selection of tumor protein markers may be based on routine experiments to determine combinations that results in optimal sensitivity. In addition, or alternatively, assays for tumor proteins provided herein may be combined with assays for other known tumor antigens.

DIAGNOSTIC KITS

The present invention further provides kits for use within any of the above diagnostic methods. Such kits typically comprise two or more components necessary for performing a diagnostic assay. Components may be compounds, reagents, containers and/or equipment. For example, one container within a kit may contain a monoclonal antibody or fragment thereof that specifically binds to an ovarian carcinoma protein. Such antibodies or fragments may be provided attached to a support material, as described above. One or more additional containers may enclose elements, such as reagents or buffers, to be used in the assay. Such kits may also, or alternatively,

contain a detection reagent as described above that contains a reporter group suitable for direct or indirect detection of antibody binding.

Alternatively, a kit may be designed to detect the level of mRNA encoding an ovarian carcinoma protein in a biological sample. Such kits generally
5 comprise at least one oligonucleotide probe or primer, as described above, that hybridizes to a polynucleotide encoding an ovarian carcinoma protein. Such an oligonucleotide may be used, for example, within a PCR or hybridization assay. Additional components that may be present within such kits include a second
10 oligonucleotide and/or a diagnostic reagent or container to facilitate the detection of a polynucleotide encoding an ovarian carcinoma protein.

The following Examples are offered by way of illustration and not by way of limitation.

EXAMPLES

Example 1Identification of Representative Ovarian Carcinoma Protein cDNAs

5

This Example illustrates the identification of cDNA molecules encoding ovarian carcinoma proteins.

Anti-SCID mouse sera (generated against sera from SCID mice carrying late passage ovarian carcinoma) was pre-cleared of E. coli and phage antigens and used at a 1:200 dilution in a serological expression screen. The library screened was made from a SCID-derived human ovarian tumor (OV9334) using a directional RH oligo(dT) priming cDNA library construction kit and the λ Screen vector (Novagen). A bacteriophage lambda screen was employed. Approximately 400,000 pfu of the amplified OV9334 library were screened.

15

196 positive clones were isolated. Certain sequences that appear to be novel are provided in Figures 1A-1S and SEQ ID NOs:1 to 71. Three complete insert sequences are shown in Figures 2A-2C (SEQ ID NOs:72 to 74). Other clones having known sequences are presented in Figures 15A-15EEE (SEQ ID NOs:82 to 310). Database searches identified the following sequences that were substantially identical to the sequences presented in Figures 15A-15EEE.

20

These clones were further characterized using microarray technology to determine mRNA expression levels in a variety of tumor and normal tissues. Such analyses were performed using a Synteni (Palo Alto, CA) microarray, according to the manufacturer's instructions. PCR amplification products were arrayed on slides, with each product occupying a unique location in the array. mRNA was extracted from the tissue sample to be tested, reverse transcribed and fluorescent-labeled cDNA probes were generated. The microarrays were probed with the labeled cDNA probes and the slides were scanned to measure fluorescence intensity. Data was analyzed using Synteni's provided GEMtools software. The results for one clone (13695, also referred to as O8E) are shown in Figure 3.

25

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Example 2

Identification of Ovarian Carcinoma cDNAs using Microarray Technology

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This Example illustrates the identification of ovarian carcinoma polynucleotides by PCR subtraction and microarray analysis. Microarrays of cDNAs were analyzed for ovarian tumor-specific expression using a Synteni (Palo Alto, CA) microarray, according to the manufacturer's instructions (and essentially as described by Schena et al., *Proc. Natl. Acad. Sci. USA* 93:10614-10619, 1996 and Heller et al., *Proc. Natl. Acad. Sci. USA* 94:2150-2155, 1997).

A PCR subtraction was performed using a tester comprising cDNA of four ovarian tumors (three of which were metastatic tumors) and a driver of cDNA from five normal tissues (adrenal gland, lung, pancreas, spleen and brain). cDNA fragments recovered from this subtraction were subjected to DNA microarray analysis where the fragments were PCR amplified, adhered to chips and hybridized with fluorescently labeled probes derived from mRNAs of human ovarian tumors and a variety of normal human tissues. In this analysis, the slides were scanned and the fluorescence intensity was measured, and the data were analyzed using Synteni's GEMtools software. In general, sequences showing at least a 5-fold increase in expression in tumor cells (relative to normal cells) were considered ovarian tumor antigens. The fluorescent results were analyzed and clones that displayed increased expression in ovarian tumors were further characterized by DNA sequencing and database searches to determine the novelty of the sequences.

Using such assays, an ovarian tumor antigen was identified that is a splice fusion between the human T-cell leukemia virus type I oncoprotein TAX (see Jin et al., *Cell* 93:81-91, 1998) and an extracellular matrix protein called osteonectin. A splice junction sequence exists at the fusion point. The sequence of this clone is presented in Figure 4 and SEQ ID NO:75. Osteonectin, unspliced and unaltered, was also identified from such assays independently.

Further clones identified by this method are referred to herein as 3f, 6b, 8e, 8h, 12c and 12h. Sequences of these clones are shown in Figures 5 to 9 and SEQ ID NOs:76 to 81. Microarray analyses were performed as described above, and are presented in Figures 10 to 14. A full length sequence encompassing clones 3f, 6b, 8e and 12h was obtained by screening an ovarian tumor (SCID-derived) cDNA library. This 2996 base pair sequence (designated O772P) is presented in SEQ ID NO:311, and the encoded 914 amino acid protein sequence is shown in SEQ ID NO:312. PSORT analysis indicates a Type 1a transmembrane protein localized to the plasma membrane.

In addition to certain of the sequences described above, this screen identified the following sequences:

Sequence	Comments
OV4vG11 (SEQ ID NO:313)	human clone 1119D9 on chromosome 20p12
OV4vB11 (SEQ ID NO:314)	human UWGC:y14c094 from chromosome 6p21
OV4vD9 (SEQ ID NO:315)	human clone 1049G16 chromosome 20q12-13.2
OV4vD5 (SEQ ID NO:316)	human KIAA0014 gene
OV4vC2 (SEQ ID NO:317)	human KIAA0084 gene
OV4vF3 (SEQ ID NO:318)	human chromosome 19 cosmid R31167
OV4vC1 (SEQ ID NO:319)	novel
OV4vH3 (SEQ ID NO:320)	novel
OV4vD2 (SEQ ID NO:321)	novel
O815P (SEQ ID NO:322)	novel
OV4vC12 (SEQ ID NO:323)	novel
OV4vA4 (SEQ ID NO:324)	novel
OV4vA3 (SEQ ID NO:325)	novel
OV4v2A5 (SEQ ID NO:326)	novel
O819P (SEQ ID NO:327)	novel
O818P (SEQ ID NO:328)	novel
O817P (SEQ ID NO:329)	novel
O816P (SEQ ID NO:330)	novel
Ov4vC5 (SEQ ID NO:331)	novel

Sequence	Comments
21721 (SEQ ID NO:332)	human lumican
21719 (SEQ ID NO:333)	human retinoic acid-binding protein II
21717 (SEQ ID NO:334)	human26S proteasome ATPase subunit
21654 (SEQ ID NO:335)	human copine I
21627 (SEQ ID NO:336)	human neuron specific gamma-2 enolase
21623 (SEQ ID NO:337)	human geranylgeranyl transferase II
21621 (SEQ ID NO:338)	human cyclin-dependent protein kinase
21616 (SEQ ID NO:339)	human prepro-megakaryocyte potentiating factor
21612 (SEQ ID NO:340)	human UPH1
21558 (SEQ ID NO:341)	human RalGDS-like 2 (RGL2)
21555 (SEQ ID NO:342)	human autoantigen P542
21548 (SEQ ID NO:343)	human actin-related protein (ARP2)
21462 (SEQ ID NO:344)	human huntingtin interacting protein
21441 (SEQ ID NO:345)	human 90K product (tumor associated antigen)
21439 (SEQ ID NO:346)	human guanine nucleotide regulator protein (tim1)
21438 (SEQ ID NO:347)	human Ku autoimmune (p70/p80) antigen
21237 (SEQ ID NO:348)	human S-laminin
21436 (SEQ ID NO:349)	human ribophorin I
21435 (SEQ ID NO:350)	human cytoplasmic chaperonin hTRiC5
21425 (SEQ ID NO:351)	humanEMX2
21423 (SEQ ID NO:352)	human p87/p89 gene
21419 (SEQ ID NO:353)	human HPBR11-7
21252 (SEQ ID NO:354)	human T1-227H
21251 (SEQ ID NO:355)	human cullin I
21247 (SEQ ID NO:356)	kunitz type protease inhibitor (KOP)
21244-1 (SEQ ID NO:357)	human protein tyrosine phosphatase receptor F (PTPRF)
21718 (SEQ ID NO:358)	human LTR repeat
OV2-90 (SEQ ID NO:359)	novel

Sequence	Comments
Human zinc finger (SEQ ID NO:360)	
Human polyA binding protein (SEQ ID NO:361)	
Human pleitrophin (SEQ ID NO:362)	
Human PAC clone 278C19 (SEQ ID NO:363)	
Human LLRep3 (SEQ ID NO:364)	
Human Kunitz type protease inhib (SEQ ID NO:365)	
Human KIAA0106 gene (SEQ ID NO:366)	
Human keratin (SEQ ID NO:367)	
Human HIV-1TAR (SEQ ID NO:368)	
Human glia derived nexin (SEQ ID NO:369)	
Human fibronectin (SEQ ID NO:370)	
Human ECMproBM40 (SEQ ID NO:371)	
Human collagen (SEQ ID NO:372)	
Human alpha enolase (SEQ ID NO:373)	
Human aldolase (SEQ ID NO:374)	
Human transf growth factor BIG H3 (SEQ ID NO:375)	
Human SPARC osteonectin (SEQ ID NO:376)	
Human SLP1 leucocyte protease (SEQ ID NO:377)	
Human mitochondrial ATP synth (SEQ ID NO:378)	
Human DNA seq clone 461P17 (SEQ ID NO:379)	
Human dbpB pro Y box (SEQ ID NO:380)	
Human 40 kDa keratin (SEQ ID NO:381)	
Human arginosuccinate synth (SEQ ID NO:382)	
Human acidic ribosomal phosphoprotein (SEQ ID NO:383)	
Human colon carcinoma laminin binding pro (SEQ ID NO:384)	

This screen further identified multiple forms of the clone O772P, referred to herein as 21013, 21003 and 21008. PSORT analysis indicates that 21003 (SEQ ID NO:386; translated as SEQ ID NO:389) and 21008 (SEQ ID NO:387; translated as SEQ ID NO:390) represent Type 1a transmembrane protein forms of

O772P. 21013 (SEQ ID NO:385; translated as SEQ ID NO:388) appears to be a truncated form of the protein and is predicted by PSORT analysis to be a secreted protein.

Additional sequence analysis resulted in a full length clone for O8E
5 (2627 bp, which agrees with the message size observed by Northern analysis; SEQ ID NO:391). This nucleotide sequence was obtained as follows: the original O8E sequence (OrigO8Econs) was found to overlap by 33 nucleotides with a sequence from an EST clone (IMAGE#1987589). This clone provided 1042 additional nucleotides upstream of the original O8E sequence. The link between the EST and O8E was confirmed by
10 sequencing multiple PCR fragments generated from an ovary primary tumor library using primers to the unique EST and the O8E sequence (ESTxO8EPCR). Full length status was further indicated when anchored PCR from the ovary tumor library gave several clones (AnchoredPCR cons) that all terminated upstream of the putative start methionine, but failed to yield any additional sequence information. Figure 16 presents
15 a diagram that illustrates the location of each partial sequence within the full length O8E sequence.

Two protein sequences may be translated from the full length O8E. For "a" (SEQ ID NO:393) begins with a putative start methionine. A second form "b" (SEQ ID NO:392) includes 27 additional upstream residues to the 5' end of the nucleotide
20 sequence.

From the foregoing it will be appreciated that, although specific embodiments of the invention have been described herein for purposes of illustration, various modifications may be made without deviating from the spirit and scope of the invention. Accordingly, the invention is not limited except as by the appended claims.
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SUMMARY OF SEQUENCE LISTING

SEQ ID NOs:1-71 are ovarian carcinoma antigen polynucleotides shown in Figures 1A-1S.

SEQ ID NOs:72-74 are ovarian carcinoma antigen polynucleotides
30 shown in Figures 2A-2C.

SEQ ID NO:75 is the ovarian carcinoma polynucleotide 3g (Figure 4).

SEQ ID NO:76 is the ovarian carcinoma polynucleotide 3f (Figure 5).
SEQ ID NO:77 is the ovarian carcinoma polynucleotide 6b (Figure 6).
SEQ ID NO:78 is the ovarian carcinoma polynucleotide 8e (Figure 7A).
SEQ ID NO:79 is the ovarian carcinoma polynucleotide 8h (Figure 7B).
5 SEQ ID NO:80 is the ovarian carcinoma polynucleotide 12e (Figure 8).
SEQ ID NO:81 is the ovarian carcinoma polynucleotide 12h (Figure 9).
SEQ ID NOs:82-310 are ovarian carcinoma antigen polynucleotides
shown in Figures 15A-15EEE.

SEQ ID NO:311 is a full length sequence of ovarian carcinoma
10 polynucleotide O772P.

SEQ ID NO:312 is the O772P amino acid sequence.

SEQ ID NOs:313-384 are ovarian carcinoma antigen polynucleotides.

SEQ ID NOs:385-390 present sequences of O772P forms.

SEQ ID NO:391 is a full length sequence of ovarian carcinoma
15 polynucleotide O8E.

SEQ ID NOs:392-393 are protein sequences encoded by O8E.

CLAIMS

1. An isolated polypeptide comprising at least an immunogenic portion of an ovarian carcinoma protein, or a variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with antigen-specific antisera is not substantially diminished, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:
 - (a) polynucleotides recited in any one of SEQ ID NOs:1-81, 313-331, 359, 366, 379, 385-387 or 391; and
 - (b) complements of the foregoing polynucleotides.
2. A polypeptide according to claim 1, wherein the polypeptide comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:
 - (a) polynucleotides recited in any one of 1-81, 313-331, 359, 366, 379, 385-387 or 391; and
 - (b) complements of such polynucleotides.
3. An isolated polynucleotide encoding at least 5 amino acid residues of a polypeptide according to claim polypeptide comprising at least an immunogenic portion of an ovarian carcinoma protein, or a variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with antigen-specific antisera is not substantially diminished, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:
 - (a) polynucleotides recited in any one of SEQ ID NOs:1-81, 319-331, 359, 385-387 or 391; and
 - (b) complements of the foregoing polynucleotides

4. A polynucleotide according to claim 3, wherein the polynucleotide encodes an immunogenic portion of the polypeptide.
5. A polynucleotide according to claim 3, wherein the polynucleotide comprises a sequence recited in any one of SEQ ID NOs:1-81, 319-331, 359, 385-387, 391 or a complement of any of the foregoing sequences.
6. An isolated polynucleotide complementary to a polynucleotide according to claim 3.
7. An expression vector comprising a polynucleotide according to claim 3 or claim 6.
8. A host cell transformed or transfected with an expression vector according to claim 7.
9. A pharmaceutical composition comprising a polypeptide according to claim 1, in combination with a physiologically acceptable carrier.
10. A pharmaceutical composition according to claim 9, wherein the polypeptide comprises an amino acid sequence encoded by a polynucleotide that comprises a sequence recited in any one of SEQ ID NOs:1-81, 313-331, 359, 366, 379, 385-387 or 391.
11. A vaccine comprising a polypeptide according to claim 1, in combination with a non-specific immune response enhancer.
12. A vaccine according to claim 11, wherein the polypeptide comprises an amino acid sequence encoded by a polynucleotide that comprises a sequence recited in any one of SEQ ID NOs:1-81, 313-331, 359, 366, 379, 385-387 or 391.
13. A pharmaceutical composition comprising:

(a) a polynucleotide encoding an ovarian carcinoma polypeptide, wherein the polypeptide comprises at least an immunogenic portion of an ovarian carcinoma protein or a variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with antigen-specific antisera is not substantially diminished, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

(i) polynucleotides recited in any one of SEQ ID NOs:1-81, 319-331, 359, 385-387 or 391; and

(ii) complements of the foregoing polynucleotides; and

(b) a physiologically acceptable carrier.

14. A pharmaceutical composition according to claim 13, wherein the polynucleotide comprises a sequence recited in any one of SEQ ID NOs:1-81, 319-331, 359, 385-387, 391 or a complement of any of the foregoing sequences.

15. A vaccine comprising:

(a) a polynucleotide encoding an ovarian carcinoma polypeptide, wherein the polypeptide comprises at least an immunogenic portion of an ovarian carcinoma protein or a variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with antigen-specific antisera is not substantially diminished, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

(i) polynucleotides recited in any one of SEQ ID NOs:1-81, 313-331, 359, 366, 379, 385-387 or 391; and

(ii) complements of the foregoing polynucleotides; and

16. A vaccine according to claim 15, wherein the polynucleotide comprises a sequence recited in any one of SEQ ID NOs:1-81, 319-331, 359, 385-387 or 391.

17. A pharmaceutical composition comprising:

(a) an antibody that specifically binds to an ovarian carcinoma protein, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

(i) polynucleotides recited in any one of SEQ ID NOs:1-81, 313-331, 359, 366, 379, 385-387 or 391; and

(ii) complements of such polynucleotides; and

(b) a physiologically acceptable carrier.

18. A method for inhibiting the development of ovarian cancer in a patient, comprising administering to a patient an effective amount of an agent selected from the group consisting of:

(a) an ovarian carcinoma polypeptide comprising at least an immunogenic portion of an ovarian carcinoma protein or a variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with antigen-specific antisera is not substantially diminished, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

(i) polynucleotides recited in any one of SEQ ID NOs:1-387 or 391; and

(ii) complements of such polynucleotides;

(b) a polynucleotide encoding a polypeptide as recited in (a); and

(c) an antibody that specifically binds to an ovarian carcinoma protein that comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

(i) polynucleotides recited in any one of SEQ ID NOs:1-387 or 391; and

(ii) complements of such polynucleotides;

and thereby inhibiting the development of ovarian cancer in the patient.

19. A method according to claim 18, wherein the agent is present within a pharmaceutical composition according to any one of claims 9, 13 or 17.
20. A method according to claim 18, wherein the agent is present within a vaccine according to any one of claims 11, 15 or 18.
21. A fusion protein comprising at least one polypeptide according to claim 1.
22. A polynucleotide encoding a fusion protein according to claim 21.
23. A pharmaceutical composition comprising a fusion protein according to claim 21 in combination with a physiologically acceptable carrier.
24. A vaccine comprising a fusion protein according to claim 21 in combination with a non-specific immune response enhancer.
25. A pharmaceutical composition comprising a polynucleotide according to claim 22 in combination with a physiologically acceptable carrier.
26. A vaccine comprising a polynucleotide according to claim 22 in combination with a non-specific immune response enhancer.
27. A method for inhibiting the development of ovarian cancer in a patient, comprising administering to a patient an effective amount of a pharmaceutical composition according to claim 23 or claim 25.
28. A method for inhibiting the development of ovarian cancer in a patient, comprising administering to a patient an effective amount of a vaccine according to claim 23 or claim 26.

29. A pharmaceutical composition, comprising:

(a) an antigen presenting cell that expresses an ovarian carcinoma polypeptide comprising at least an immunogenic portion of an ovarian carcinoma protein or a variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with antigen-specific antisera is not substantially diminished, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

(i) polynucleotides recited in any one of SEQ ID NOs:1-387 or 391; and

(ii) complements of such polynucleotides; and

(b) a pharmaceutically acceptable carrier or excipient.

30. A vaccine, comprising:

(a) an antigen presenting cell that expresses an ovarian carcinoma polypeptide comprising at least an immunogenic portion of an ovarian carcinoma protein or a variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with antigen-specific antisera is not substantially diminished, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

(i) polynucleotides recited in any one of SEQ ID NOs:1-387 or 391; and

(ii) complements of such polynucleotides; and

(b) a non-specific immune response enhancer.

31. A vaccine comprising:

(a) an anti-idiotypic antibody or antigen-binding fragment thereof that is specifically bound by an antibody that specifically binds to an ovarian carcinoma protein that comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

(i) polynucleotides recited in any one of SEQ ID NOs:1-387 or 391; and

- (ii) complements of such polynucleotides; and
- (b) non-specific immune response enhancer.

32. A vaccine according to claim 30 or claim 31, wherein the immune response enhancer is an adjuvant.

33. A pharmaceutical composition, comprising:

(a) a T cell that specifically reacts with an ovarian carcinoma polypeptide comprising at least an immunogenic portion of an ovarian carcinoma protein or a variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with antigen-specific antisera is not substantially diminished, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

(i) polynucleotides recited in any one of SEQ ID NOs:1-387 or 391; and

- (ii) complements of such polynucleotides; and
- (b) a physiologically acceptable carrier.

34. A vaccine, comprising:

(a) a T cell that specifically reacts with an ovarian carcinoma polypeptide comprising at least an immunogenic portion of an ovarian carcinoma protein or a variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with antigen-specific antisera is not substantially diminished, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

(i) polynucleotides recited in any one of SEQ ID NOs:1-387 or 391; and

- (ii) complements of such polynucleotides; and
- (b) a non-specific immune response enhancer.

35. A method for inhibiting the development of ovarian cancer in a patient, comprising administering to the patient an effective amount of a pharmaceutical composition according to claim 29 or claim 33.

36. A method for inhibiting the development of ovarian cancer in a patient, comprising administering to the patient an effective amount of a vaccine according to any one of claims 30, 31 or 34.

37. A method for stimulating and/or expanding T cells, comprising contacting T cells with:

(a) an ovarian carcinoma polypeptide comprising at least an immunogenic portion of an ovarian carcinoma protein or a variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with antigen-specific antisera is not substantially diminished, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

(i) polynucleotides recited in any one of SEQ ID NOs:1-387 or 391; and

(ii) complements of such polynucleotides;

(b) a polynucleotide encoding such a polypeptide; and/or

(c) an antigen presenting cell that expresses such a polypeptide under conditions and for a time sufficient to permit the stimulation and/or expansion of T cells.

38. A method according to claim 37, wherein the T cells are cloned prior to expansion.

39. A method for stimulating and/or expanding T cells in a mammal, comprising administering to a mammal a pharmaceutical composition comprising:

(a) one or more of:

(i) an ovarian carcinoma polypeptide comprising at least an immunogenic portion of an ovarian carcinoma protein or a variant thereof that differs in one

or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with antigen-specific antisera is not substantially diminished, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

polynucleotides recited in any one of SEQ ID NOs:1-387 or 391; and

complements of such polynucleotides;

(ii) a polynucleotide encoding an ovarian carcinoma polypeptide;

or

(iii) an antigen-presenting cell that expresses an ovarian carcinoma polypeptide; and

(b) a physiologically acceptable carrier or excipient;

and thereby stimulating and/or expanding T cells in a mammal.

40. A method for stimulating and/or expanding T cells in a mammal, comprising administering to a mammal a vaccine comprising:

(a) one or more of:

(i) an ovarian carcinoma polypeptide comprising at least an immunogenic portion of an ovarian carcinoma protein or a variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with antigen-specific antisera is not substantially diminished, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

polynucleotides recited in any one of SEQ ID NOs:1-387 or 391; and

complements of such polynucleotides;

(ii) a polynucleotide encoding an ovarian carcinoma polypeptide;

or

(iii) an antigen-presenting cell that expresses an ovarian carcinoma polypeptide; and

- (b) a non-specific immune response enhancer;
and thereby stimulating and/or expanding T cells in a mammal.

41. A method for inhibiting the development of ovarian cancer in a patient, comprising administering to a patient T cells prepared according to the method of claim 39 or claim 40.

42. A method for inhibiting the development of ovarian cancer in a patient, comprising the steps of:

- (a) incubating CD4⁺ T cells isolated from a patient with one or more of:
 - (i) an ovarian carcinoma polypeptide comprising at least an immunogenic portion of an ovarian carcinoma protein or a variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with antigen-specific antisera is not substantially diminished, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

polynucleotides recited in any one of SEQ ID NOs:1-387 or 391; and

complements of such polynucleotides;

- (ii) a polynucleotide encoding an ovarian carcinoma polypeptide;
- or
- (iii) an antigen-presenting cell that expresses an ovarian carcinoma polypeptide;

such that T cells proliferate; and

- (b) administering to the patient an effective amount of the proliferated T cells, and therefrom inhibiting the development of ovarian cancer in the patient.

43. A method for inhibiting the development of ovarian cancer in a patient, comprising the steps of:

- (a) incubating CD4⁺ T cells isolated from a patient with one or more of:

(i) an ovarian carcinoma polypeptide comprising at least an immunogenic portion of an ovarian carcinoma protein or a variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with antigen-specific antisera is not substantially diminished, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

polynucleotides recited in any one of SEQ ID NOs:1-387 or 391; and

complements of such polynucleotides;

(ii) a polynucleotide encoding an ovarian carcinoma polypeptide;
or

(iii) an antigen-presenting cell that expresses an ovarian carcinoma polypeptide;

such that T cells proliferate;

(b) cloning one or more proliferated cells; and

(c) administering to the patient an effective amount of the cloned T cells.

44. A method for inhibiting the development of ovarian cancer in a patient, comprising the steps of:

(a) incubating CD8⁺ T cells isolated from a patient with one or more of:

(i) an ovarian carcinoma polypeptide comprising at least an immunogenic portion of an ovarian carcinoma protein or a variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with antigen-specific antisera is not substantially diminished, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

polynucleotides recited in any one of SEQ ID NOs:1-387 or 391; and

complements of such polynucleotides;

- (ii) a polynucleotide encoding an ovarian carcinoma polypeptide;
 - or
 - (iii) an antigen-presenting cell that expresses an ovarian carcinoma polypeptide;
- such that T cells proliferate; and
- (b) administering to the patient an effective amount of the proliferated T cells, and therefrom inhibiting the development of ovarian cancer in the patient.

45. A method for inhibiting the development of ovarian cancer in a patient, comprising the steps of:

- (a) incubating CD8⁺ T cells isolated from a patient with one or more of:
 - (i) an ovarian carcinoma polypeptide comprising at least an immunogenic portion of an ovarian carcinoma protein or a variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with antigen-specific antisera is not substantially diminished, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:
 - polynucleotides recited in any one of SEQ ID NOs:1-387 or 391; and
 - complements of such polynucleotides;
 - (ii) a polynucleotide encoding an ovarian carcinoma polypeptide;
 - or
 - (iii) an antigen-presenting cell that expresses an ovarian carcinoma polypeptide;
- such that the T cells proliferate;
- (b) cloning one or more proliferated cells ; and
 - (c) administering to the patient an effective amount of the cloned T cells.

46. A method for identifying a secreted tumor antigen, comprising the steps of:

- (a) implanting tumor cells in an immunodeficient mammal;
- (b) obtaining serum from the immunodeficient mammal after a time sufficient to permit secretion of tumor antigens into the serum;
- (c) immunizing an immunocompetent mammal with the serum;
- (d) obtaining antiserum from the immunocompetent mammal; and
- (e) screening a tumor expression library with the antiserum, and therefrom identifying a secreted tumor antigen.

47. A method according to claim 46, wherein the immunodeficient mammal is a SCID mouse and wherein the immunocompetent mammal is an immunocompetent mouse.

48. A method for identifying a secreted ovarian carcinoma antigen, comprising the steps of:

- (a) implanting ovarian carcinoma cells in a SCID mouse;
- (b) obtaining serum from the SCID mouse after a time sufficient to permit secretion of ovarian carcinoma antigens into the serum;
- (c) immunizing an immunocompetent mouse with the serum;
- (d) obtaining antiserum from the immunocompetent mouse; and
- (e) screening an ovarian carcinoma expression library with the antiserum, and therefrom identifying a secreted ovarian carcinoma antigen.

49. A method for determining the presence or absence of a cancer in a patient, comprising the steps of:

- (a) contacting a biological sample obtained from a patient with a binding agent that binds to an ovarian carcinoma protein, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

- (i) polynucleotides recited in any one of SEQ ID NOs:1-387 or 391; and
- (ii) complements of the foregoing polynucleotides;
- (b) detecting in the sample an amount of polypeptide that binds to the binding agent; and
- (c) comparing the amount of polypeptide to a predetermined cut-off value, and therefrom determining the presence or absence of a cancer in the patient.

50. A method according to claim 49, wherein the binding agent is an antibody.

51. A method according to claim 50, wherein the antibody is a monoclonal antibody.

52. A method according to claim 49, wherein the cancer is ovarian cancer.

53. A method for monitoring the progression of a cancer in a patient, comprising the steps of:

- (a) contacting a biological sample obtained from a patient at a first point in time with a binding agent that binds to an ovarian carcinoma protein, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

- (i) polynucleotides recited in any one of SEQ ID NOs:1-387 or 391; and

- (ii) complements of the foregoing polynucleotides;

- (b) detecting in the sample an amount of polypeptide that binds to the binding agent;

- (c) repeating steps (a) and (b) using a biological sample obtained from the patient at a subsequent point in time; and

(d) comparing the amount of polypeptide detected in step (c) to the amount detected in step (b) and therefrom monitoring the progression of the cancer in the patient.

54. A method according to claim 53, wherein the binding agent is an antibody.

55. A method according to claim 54, wherein the antibody is a monoclonal antibody.

56. A method according to claim 53, wherein the cancer is ovarian cancer.

57. A method for determining the presence or absence of a cancer in a patient, comprising the steps of:

(a) contacting a biological sample obtained from a patient with an oligonucleotide that hybridizes to a polynucleotide that encodes an ovarian carcinoma protein, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

(i) polynucleotides recited in any one of SEQ ID NOs:1-387 or 391; and

(ii) complements of the foregoing polynucleotides;

(b) detecting in the sample an amount of a polynucleotide that hybridizes to the oligonucleotide; and

(c) comparing the amount of polynucleotide that hybridizes to the oligonucleotide to a predetermined cut-off value, and therefrom determining the presence or absence of a cancer in the patient.

58. A method according to claim 57, wherein the amount of polynucleotide that hybridizes to the oligonucleotide is determined using a polymerase chain reaction.

59. A method according to claim 57, wherein the amount of polynucleotide that hybridizes to the oligonucleotide is determined using a hybridization assay.

60. A method for monitoring the progression of a cancer in a patient, comprising the steps of:

(a) contacting a biological sample obtained from a patient with an oligonucleotide that hybridizes to a polynucleotide that encodes an ovarian carcinoma protein, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

(i) polynucleotides recited in any one of SEQ ID NOs:1-387 or 391; and

(ii) complements of the foregoing polynucleotides;

(b) detecting in the sample an amount of a polynucleotide that hybridizes to the oligonucleotide;

(c) repeating steps (a) and (b) using a biological sample obtained from the patient at a subsequent point in time; and

(d) comparing the amount of polynucleotide detected in step (c) to the amount detected in step (b) and therefrom monitoring the progression of the cancer in the patient.

61. A method according to claim 60, wherein the amount of polynucleotide that hybridizes to the oligonucleotide is determined using a polymerase chain reaction.

62. A method according to claim 60, wherein the amount of polynucleotide that hybridizes to the oligonucleotide is determined using a hybridization assay.

63. A diagnostic kit, comprising:

(a) one or more antibodies or antigen-binding fragments thereof that specifically bind to an ovarian carcinoma protein that comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

- (i) polynucleotides recited in any one of SEQ ID NOs:1-387 or 391; and
- (ii) complements of the foregoing polynucleotides.; and
- (b) a detection reagent comprising a reporter group.

64. A kit according to claim 63, wherein the antibodies are immobilized on a solid support.

65. A kit according to claim 63, wherein the solid support comprises nitrocellulose, latex or a plastic material.

66. A kit according to claim 63, wherein the detection reagent comprises an anti-immunoglobulin, protein G, protein A or lectin.

67. A kit according to claim 63, wherein the reporter group is selected from the group consisting of radioisotopes, fluorescent groups, luminescent groups, enzymes, biotin and dye particles.

68. A diagnostic kit, comprising:

(a) an oligonucleotide comprising 10 to 40 nucleotides that hybridize under moderately stringent conditions to a polynucleotide that encodes an ovarian carcinoma protein, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

- (i) polynucleotides recited in any one of SEQ ID NOs:1-387 or 391; and
- (ii) complements of the foregoing polynucleotides; and
- (b) a diagnostic reagent for use in a polymerase chain reaction or hybridization assay.

SEQUENCE LISTING

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<120> COMPOSITIONS AND METHODS FOR THE THERAPY AND
DIAGNOSIS OF OVARIAN CANCER

<130> 210121.462PC

<140> PCT

<141> 1999-12-17

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<211> 1043

<212> DNA

<213> Homo sapien

<400> 19

ctctgtggaa	aactgatgag	gaatgaattt	accattaccc	atgtttctcat	ccccaagcaa	60
agtgtctgggt	ctgattactg	caacacagag	aacgaagaag	aacttttcct	catacaggat	120
cagcagggcc	tcacacact	gggctggatt	catactcacc	ccacacagac	cgcgtttctc	180
tccagtgtcg	acctacacac	tactgtctct	taccagatga	tgttgccaga	gtcagtagcc	240
attgtttgct	cccccaagtt	ccaggaaact	ggattcttta	aactaactga	ccatggacta	300
gaggagattt	cttcctgtcg	ccagaaagga	tttcatccac	acagcaagga	tccacctctg	360
ttctgtagct	gcagccacgt	gactgttggt	gacagagcag	tgaccatcac	agaccttcga	420
tgagcgtttg	agtccaacac	cttccaagaa	caacaaaacc	atatcagtgt	actgtagccc	480
cttaatttaa	gctttctaga	aagctttgga	agtttttgta	gataqtagaa	aggggggcat	540
cacctgagaa	agagctgatt	ttgtatttca	ggtttgaaaa	gaaataactg	aacatatttt	600
ttaggcaagt	cagaaagaga	acatggtcac	ccaaaagcaa	ctgtaactca	gaaattaagt	660
tactcagaaa	ttaagtagct	cagaaattaa	gaaagaatgg	tataatgaac	ccccatatac	720
ccttccttct	ggattcacca	attgttaaca	tttttttcct	ctcagctatc	cttctaattt	780
ctctctaatt	tcaatttggt	tatatattacc	tctgggctca	ataagggcat	ctgtgcagaa	840
atttggaaagc	catttagaaa	atcttttgga	ttttcctgtg	gtttatggca	atatgaatgg	900
agcttattac	tggggtgagg	gacagcttac	tccatttgac	cagattgttt	ggctaacaca	960
tcccgaagaa	tgattttgtc	aggaattatt	gttatttaaat	aaatatttca	ggatattttt	1020
cctctacaat	aaagtaacaa	tta				1043

<210> 20

<211> 448

<212> DNA

<213> Homo sapien

<400> 20

ggacgacaag	gccatggcga	tatcggatcc	gaattcaagc	ctttggaatt	aaataaacct	60
ggaacagggg	aggtgaaagt	tggagtgaga	tgtcttccat	atctatacct	ttgtgcacag	120
ttgaatggga	actgtttggg	tttagggcat	cttagagttg	attgatggaa	aaagcagaca	180

```

ggaactgggtg ggaggtcaag tggggaagtt ggtgaatgtg gaataactta cctttgtgct 240
ccacttaaac cagatgtgtt gcagctttcc tgacatgcaa ggatctactt taattccaca 300
ctctcattaa taaattgaat aaaagggaat gttttggcac ctgatataat ctgccaggct 360
atgtgacagt aggaaggaat ggtttccctt aacaagccca atgcaactgt ctgactttat 420
aaattattta ataaaatgaa ctattatc 448

```

```

<210> 21
<211> 411
<212> DNA
<213> Homo sapien

```

```

<400> 21
ggcagtga c ttcacatca tgggaaccac cttccctttt cttcaggatt ctctgtagtg 60
gaagagagca cccagtgttg ggctgaaaac atctgaaagt agggagaaga acctaaaata 120
atcagtatct cagagggctc taagggtgcc aagaagtctca ctggacattt aagtgccaac 180
aaaggcatac tttcggaatc gccaaagtcaa aactttctaa cttctgtctc tctcagagac 240
aagtgaagact caagagtcta ctgctttagt ggcaactaca gaaaactggg gttaccagaga 300
aaaacaggag caattagaaa tggttccaat atttcaaagc tccgcaaaca ggatgtgctt 360
tcctttgccc atttaggggt tcttctcttt cctttctctt tattaaccac t 411

```

```

<210> 22
<211> 896
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(896)
<223> n = A,T,C or G

```

```

<400> 22
tgcgctgaaa acaacggcct cctttactgt taaaatgcag ccacaggtgc ttagccgtgg 60
gcatctcaac caccagcctc tgtggggggc aggtggggcg cctgtgggc ctctggggcc 120
acgtccagcc tctgtcctct gccttccgtt cttcgacagt gttcccggca tccctgggtca 180
cttggtactt ggcggtgggc tcctgtgctg ctccagcagc tcctccagggn ggtcgggccg 240
cttcaccgca gcctcatgtt gtgtccggag gctgctcacg gcctcctcct tcctcgcgag 300
ggctgtcttc accctccggn gcacctcctc cagctccagc tgcctggggg cctgcagcgt 360
ggccagctcg gccttggcct gcgcgctctc ctctcarag gctgccagcc ggtcctcgaa 420
ctcctggcgg atcacctggg ccaggttgct gcgctcgcta gaaagtgtct cgttcaccgc 480
ctgcgcctcc tccagcgccc gctccttctg ccgcacaagg ccctgcagac gcagattctc 540
gccctcggcc tccccaaagt ggcccttcag ctccgagcac cgctcctgaa gcttcgctc 600
cgactgctcc agctcggaga gctcggcctc gtacttgctc cgtaagcgct tgatcgggct 660
ctcggcagcc ttctcactct cctccttggc cagcgccatg tcggcctcca gccggtgaat 720
gaccagctca atctccttgt cccggccttt ccggatttct tccctcagct cctgttcccg 780
gttcagcagc cagcctcct ccttcttggg gcggccggcc tcccacgcct gcctctccag 840
ctccagctgc tgettcaggg tattcagctc catctggcgg gcctgcagcg tggcca 896

```

```

<210> 23
<211> 111
<212> DNA
<213> Homo sapien

```

```

<400> 23
caacttatta cttgaaatta taatatagcc tgtccggttg ctgtttccag gctgtgatat 60
attttcctag tggtttgact ttaaaaataa ataaggttta attttctccc c 111

```

<210> 24
 <211> 531
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(531)
 <223> n = A,T,C or G

<400> 24
 tgcaagtcac gggagtttat ttattttaatt tttttcccca gatggagact ctgtcgccca 60
 ggctggagtg caatgggtgtg atcttggctc actgcaacct ccacctcctg gggtcaagcg 120
 atttcctgc cacagcctcc cgagtagctg ggattacagg tgcccgccac cacaccagc 180
 taatttttat atttttagta aagacagggt ttcccatgt tggccaggct ggtcttgaac 240
 ttctgacctc aggtgatcca cctgcctcgg cctcccaaag tgttgggatt acaggcgtga 300
 gctaccggtg cctggccagc cactggagtt taaaggacag tcatgttggc tccagcctaa 360
 ggcggcattt tccccatca gaaagcccgc ggctcctgta cctcaaaaata gggcacctgt 420
 aaagtcagtc agtgaagtct ctgctctaac tggccacccg gggccattgg cntctgacac 480
 agccttgcca ggangcctgc atctgcaaaa gaaaagttca cttcctttcc g 531

<210> 25
 <211> 471
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(471)
 <223> n = A,T,C or G

<400> 25
 cagagaatct kagaaagatg tgcggttttc ttttaatgaa tgagagaagc ccatttgtat 60
 ccctgaatca ttgagaaaag gcggcgggtg cgacagcggc gacctagga tcgatctgga 120
 gggacttggg gaggctgcag agacctctag ctgcagcggc agggacctcc cgccgggatg 180
 cctggggagc agatggacct tactggaagt cagttggatt cagatttctc tcagcaagat 240
 actccttgcc tgataattga agattctcag cctgaaaagc aggttctaga ggatgattct 300
 ggttctcact tcagtatgct atctcgacac cttcctaate tccagacgca caaagaaaat 360
 cctgtgttggt atgttgngtc caatccttga acaaacagct ggagaagaac gaggagaccg 420
 gtaatagtgg gttcaatgaa catattgaaag aaaaccagggt tgcagaccct g 471

<210> 26
 <211> 541
 <212> DNA
 <213> Homo sapien

<400> 26
 gactgtcctg aacaagggac ctctgaccag agagctgcag gagatgcaga gtggtggcag 60
 gactggaagc caaagaacac ccaccttcct cccttgaagg agtagagcaa ccatacagaag 120
 atactgtttt attgctcttg tcaaacaagt cttcctgagt tgacaaaacc tcaggctctg 180
 gtgacttctg aatctgcagt ccactttcca taagtcttg tgcagacaac tgttcttttg 240
 cttccatagc agcaacagat gctttggggc taaaaggcat gtcctctgac cttgcagggtg 300
 gtggattttg ctctttttaca acatgtacat ccttactggg ctgtgctgtc acagggatgt 360
 ccttgctgga ctgttctgct atggggatat cttcgttgga ctgttcttca tgcttaattg 420

```

cagtattagc atccacatca gacagcctgg tataaccaga gttggtggtt actgattgta      480
gctgctcttt gtccacttca tatggcacia gtatcttcct caacatcctg gctctgggaa      540
g                                                                    541

```

```

<210> 27
<211> 461
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(461)
<223> n = A,T,C or G

```

```

<400> 27
gaaatgtata tttaatcatt ctcttgaacg atcagaactc traaatcagt tttctataac      60
arcatgtaat acagtcaccg tggctccaag gtccaggaag gcagtgggta acacatgaag      120
agtgtgggaa gggggctgga aacaaagtat tcttttcctt caaagcttca ttcctcaagg      180
cctcaattca agcagtcatt gtccttgctt tcaaaagtct gtgtgtgctt catggaaggt      240
atatgtttgt tgccttaatt tgaattgtgg ccaggaaggg tctggagatc taaattcaga      300
gtaagaaaac ctgagctaga actcaggcat ttctcttaca gaacttggct tgcagggtag      360
aatgaangga aagaaactta gaagctcaac aagctgaaga taatcccatc aggcatttcc      420
cataggcctt gcaactctgt tcaactgagag atgtttatcct g                                                                    461

```

```

<210> 28
<211> 541
<212> DNA
<213> Homo sapien

```

```

<400> 28
agtctggagt gagcaaaca gagcaagaaa caarragaag ccaaaagcag aaggctccaa      60
tatgaacaag ataaatctat cttcaaagac atattagaag ttgggaaaat aattcatgtg      120
aactagacaa gtgtgttaag agtgataagt aaaatgcacg tggagacaag tgcattccca      180
gatctcaggg acctccccct gcctgtcacc tggggagtga gaggacagga tagtgcatgt      240
tctttgtctc tgaattttta gttatatgtg ctgtaatgtt gctctgagga agcccctgga      300
aagtctatcc caacatatcc acatcttata ttccacaaat taagctgtag tatgtaccct      360
aagacgctgc taattgactg ccacttcgca actcaggggc ggctgcattt tagtaatggg      420
tcaaattgatt cactttttat gatgcttccc aagggtgcctt ggcttctctt cccaactgac      480
aaatgcccaa gttgagaaaa atgatcataa ttttagcata aaccgagcaa tcggcgaccc      540
c                                                                    541

```

```

<210> 29
<211> 411
<212> DNA
<213> Homo sapien

```

```

<400> 29
tagctgtctt cctcactctt atggcaatga ccccatatct taatggatta agataatgaa      60
agtgtatttc ttacactctg tatctatcac cagaagctga ggtgatagcc cgcttgctcat      120
tgtcatccat attctgggac tcaggcggga actttctgga atattgccag ggagcatggc      180
agagggggcac agtgcattct gggggaatgc acattggctc agcctgggta atgagtgata      240
tacattacct ctgttcacaa ctcatggccc agcaccagtc acaaggcccc accaaatacc      300
agagcccaag aaatgtagtc ctgttgatat ggttttgctg tgtcccaacc caaatctcat      360
cttgaattgt aagctcccat aattcccatg tgttgtggga gggacctggg g                                                                    411

```

<210> 30
 <211> 511
 <212> DNA
 <213> Homo sapien

<400> 30
 atcatgagga tgttaccaaa gggatggtac taaaccattt gtattcgtct gttttcacac 60
 tgctttgaag atactacctg agactgggta atttataaac aaaagagatt taattgactc 120
 acagttctgc atggctgaag aggcctcagg aaacttacag tcatggtgga aggcaaagga 180
 ggagcaaggc atgtcttaca tgtcagtagg agagagagcg agagcaggag aacctgccac 240
 ttataaacca ttcagatctc ataactccct atcatgagaa aaacatggag gaaaccaccc 300
 tcatgatcca atcacctccc gccagggtccc tccctcgaca cgtggggatt ataattcagg 360
 attagaggga cacagagaca aaccatatca tcatcatga gaaatccacc ctcatagtec 420
 aatcagctcc taccaggccc cacctccaac actggggatt gcaattcaac atgagatttg 480
 gatggggaca cagattcaaa ccatatcata c 511

<210> 31
 <211> 827
 <212> DNA
 <213> Homo sapien

<400> 31
 catggccttt ctcccttagag gccagaggtg ctgccctggc tgggagtga gctccaggca 60
 ctaccagctt tcttgatttt cccgtttggt ccatgtgaag agctaccacg agccccagcc 120
 tcacagtgtc cactcaaggg cagcttggtc ctcttgctct gcagaggcag gctggtgtga 180
 ccctgggaac ttgaccggg aacaacagggt ggcccagagt gagtgtggcc tggcccctca 240
 acctagtgtc cgtcctctc tctcctggag ccagtcttga gtttaaaggc attaagtgtt 300
 agatacaagc tccttgtggc tggaaaaaca cccctctgct gataaagctc agggggcact 360
 gaggaagcag agggcccttg ggggtgccct cctgaagaga gcgtcaggcc atcagctctg 420
 tccctctggt gctccacgt ctgttccctc cctccatct ctgggagcag ctgcacctga 480
 ctggccacgc gggggcagtg gaggcacagg ctgaggggtg ccgggctacc tggcacctta 540
 tggcttacaa agtagagttg gccagtttc cttccacctg aggggagcac tctgactcct 600
 aacagtcttc cttgccctgc catcatctgg ggtggctggc tgtcaagaaa ggccgggcat 660
 gctttctaaa cacagccaca ggaggcttgt agggcatctt ccagggtggg aaacagtctt 720
 agataagtaa ggtgacttgc ctaaggcctc ccagcacctt tgatcttga gtctcacagc 780
 agactgcatg tsaacaactg gaaccgaaaa catgcctcag tataaaa 827

<210> 32
 <211> 291
 <212> DNA
 <213> Homo sapien

<400> 32
 ccagaacctc cttctctttg gagaatgggg aggcctcttg gagacacaga gggtttcacc 60
 ttggatgacc tctagagaaa ttgcccaaga agcccacctt ctggteccaa cctgcagacc 120
 ccacagcagt cagttggtca ggcctgctg tagaaggcca cttggctcca ttgctgctt 180
 ccaaccaatg ggcaggagag aaggccttta tttctcgccc acccattctc ctgtaccagc 240
 acctccgttt tcagtcagygt ttgtccagca acgggtaccgt ttacacagtc a 291

<210> 33
 <211> 491
 <212> DNA
 <213> Homo sapien

<400> 33


```

tgcattgtagt tttatttatg tgttttsgtc tggaaaacca agtgtcccag cagcatgact      60
gaacatcact cacttcccct acttgatcta caaggccaac gccgagagcc cagaccagga      120
ttccaaacac actgcacgag aatattgtgg atccgctgtc aggttaagtgt ccgtcactga      180
cccaracgct gttacgtggc acatgactgt acagtgccac gtaacagcac tgtacttttc      240
tcccatgaac agttacctgc catgtatcta catgattcag aacattttga acagttaatt      300
ctgacacttg aataatccca tcaaaaaccg taaaatcact ttgatgtttg taacgacaac      360
atagcatcac ttacgacag aatcatctgg aaaaacagaa caacgaatac atacatctta      420
aaaaatgctg ggggtgggcca ggcacagctt cgcgctgta atcccagcac tttgggaggg      480
ttaagcgggt g

```

<210> 34
 <211> 521
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(521)
 <223> n = A,T,C or G

```

<400> 34
tggggcggaa agaagccaag gccaaggagc tgggtcggca gctgcagctg gaggccyagg      60
agcagaggaa gcagaagaag cggcagagtg tgtcgggcct gcacagatac cttcacttgc      120
tggatggaaa tgaaaattac ccgtgtcttg tggatgcaga cgggtgatgtg atttccttcc      180
caccaataac caacagttag aagacaaagg ttaagaaaac gacttctgat ttgtttttgg      240
aagtaacaag tgccaccagt ctgcagattt gcaaggatgt catggatgcc ctcattctga      300
aaatggcaag aaatgaaaaa gtacacttta gaaaataaag aggaaggatc actctcagat      360
actgaagccg atgcagtctc tggacaactt ccagatccca caacgaatcc cagtgtctga      420
aaggacgggc ccttccttct ggtggtggaa cangtcccgg tggatgatct tggaanggaa      480
cctgaangtg gtgtaccccg tccaaggccg accttgggcca c

```

<210> 35
 <211> 161
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(161)
 <223> n = A,T,C or G

```

<400> 35
tcccgcgctc gcagggcncg tgcacactgc cygtccgccc gctcgctcgc tgcgccgccc      60
cgccgcgctg ccgaccgyca gcatgctgcc gagagtgggc tgccccgcgc tgccgctgcc      120
gccgcccgcg ctgctgccgc tgctgcccgt gctgctgctg c

```

<210> 36
 <211> 341
 <212> DNA
 <213> Homo sapien

```

<400> 36
ggcgggtagg catggaactg agaagaacga agaagctttc agactacgtg gggaagaatg      60
aaaaaaccaa aattatcgcc aagattcagc aaagggggaca gggagctcca gccgagagc      120
ctattattag cagtgaggag cagaagcagc tgatgctgta ctatcacaga agacaagagg      180

```

```

agctcaagag attggaagaa aatgatgatg atgcctatatt aaactcacca tgggcgagata 240
acactgcttt gaaaagacat ttcatggag tgaaagacat aaagtggaga ccaagatgaa 300
gttcaccagc tgatgacact tccaaagaga ttagctcacc t 341

```

```

<210> 37
<211> 521
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(521)
<223> n = A,T,C or G

```

```

<400> 37
tctgaagggtt aaatgtttca tctaaatagg gataatgrta aacacctata gcatagagtt 60
gtttgagatt aaatgagata atacatgtaa aattatgtgc ctggcataca gcaagattgt 120
tggtgtgtgt gatgatgatg atgatgatga taatattttt ctatccccag tgcacaactg 180
cttgaaccta ttagataatc aatacatggt tcttgaactg agatcaattt ccccatgttg 240
tctgactgat gaagccctac attttcttct agaggagatg acatttgagc aagatcttaa 300
agaaaatcag atgccttcac ctgaccactg cttggtgatc ccatggcact ttgtacatct 360
ctccattagc tctcatctca ccagcccac c attattgtat gtgctgcctt ctgaagcttg 420
cagctggcta ccatcmggtg gaataaaaat catcctttca taaaatagtg accctccttt 480
tttattttgca tttcccaaag ccaagcaccg tggganggta g 521

```

```

<210> 38
<211> 461
<212> DNA
<213> Homo sapien

```

```

<400> 38
tatgaagaag ggaaaagaag ataattttgt aaagaaatgg gtccagttac tagtctttga 60
aaagggtcag tctgtagctc ttcttaatga gaataggcag ctttcagttg ctgagggtca 120
gatttcctta gtggtgtatc taatcacagg aaacatctgt ggttccctcc agtctctttc 180
tgggggactt gggcccaact ctcatctcat ttaattagag gaaatagaac tcaaagtaca 240
atttactggt gtttaacaat gccacaaaga catggttggg agctatttct tgatttgtgt 300
aaaatgctgt ttttgtgtgc tcataatggt tccaaaaatt ggggtgctggc caaagagaga 360
tactgttaca gaagccagca agaagacctc tgttcattca cccccccggg gatatcagga 420
attgactcca gtgtgtgcaa atccagtttg gcctatcttc t 461

```

```

<210> 39
<211> 769
<212> DNA
<213> Homo sapien

```

```

<400> 39
tgagggactg attggtttgc tctctgctat tcaattcccc aagcccaactt gttcctgcag 60
cgtcctcctt ctcatctcct ttagttgtac cctctctttc atctgagacc tttccttctt 120
gatgtgcctt tttctctctt ttgctttttc tgatgttctg ctgagcatgt tctgggtgct 180
tctcatctgc atcattcctt tcagatgctg tagcttcttc ctctctttc tgctcctttt 240
tctttttctt ttttttgggg ggcttgcctt ctgactgcag ttgaggggcc ccagggctct 300
ggcctttgat acgagccagg aaggcctgct cctgggcctc taggcgagca agcttggcct 360
tcattgtgat cccaagacgg gcagccttgt gtgctgttcg cccctcacag gcttggagca 420
gcattctcct agtcagaatc tttggggact tggacccttg gttgtcgtca tcaactgcagc 480
tctccaagtc tttgtttggc ttctctccac ctgaagtcaa ttagccatc ttcacaaact 540

```

tctgatacag	caagttgggc	ttgggatgat	tataacgggt	ggtctcctta	gaaaggctcc	600
ttatctgtac	tccatcctgc	ccagtttcca	ctaccaagtt	ggccgcagtc	ttgttgaaga	660
gctcattcca	ccagtgggtt	gtgaactcct	tggcagggtc	atgtcctacc	ccatgagtgt	720
cttgcttcag	ygtcacctg	agagcctgag	tgataccatt	ctccttccg		769

<210> 40

<211> 292

<212> DNA

<213> Homo sapien

<400> 40

gacaacatga	aataaatcct	agaggacaaa	attaaactca	atagagtgt	gtctagttaa	60
aaactcgaaa	aatgagcaag	tctggtggga	gtggaggaag	ggctatacta	taaatccaag	120
tgggcctcct	gattcttaaca	agccatgctc	attatacaca	tctctgaact	ggacatacca	180
cctttacgca	ggaaacagg	cttggaactt	ctaagggaag	ttaacatgca	ccacccacat	240
ctaaccctacc	tgccgggtag	gtaccatccc	tgcttcgctg	aatcagtg	tc	292

<210> 41

<211> 406

<212> DNA

<213> Homo sapien

<400> 41

ttggaattaa	ataaacctgg	aacaggggaag	gtgaaagttg	gagtgagatg	tcttccatat	60
ctataccttt	gtgcacagtt	gaatgggaac	tgtttgggtt	tagggcatct	tagagttgat	120
tgatggaaaa	agcagacagg	aactggtggg	aggtcaagtg	gggaagttgg	tgaatgtgga	180
ataacttacc	tttgtgctcc	acttaaacca	gatgtgttgc	agctttcctg	acatgcaagg	240
atctacttta	attccacact	ctcattaata	aattgaataa	aagggaatgt	tttggcacct	300
gatataatct	gccaggctat	gtgacagtag	gaagggaatg	tttcccctaa	caagcccaat	360
gcactggtct	gactttataa	attatttaat	aaaatgaact	attatc		406

<210> 42

<211> 381

<212> DNA

<213> Homo sapien

<400> 42

aaactggacc	tgcaacagg	acatgaattt	actgcarggt	ctgagcaagc	tcagcccctc	60
tacctcagg	ccccacagc	atgactacct	cccccaggag	cgggaggggtg	aagggggcct	120
gtctctgcaa	gtggagccag	agtggaggaa	tgagctctga	agacacagca	cccagccttc	180
tcgcaccagc	caagccttaa	ctgcctgcct	gacctgaac	cagaaccag	ctgaactgcc	240
cctccaagg	acaggaagg	tgggggagg	agttttacaac	ccaagccatt	ccaccccctc	300
ccctgctgg	gagaatgaca	catcaagctg	ctaacaattg	ggggaagg	aaggaagaaa	360
actctgaaaa	caaaatcttg	t				381

<210> 43

<211> 451

<212> DNA

<213> Homo sapien

<400> 43

catgcgtttc	accactgttg	gccaggctgg	tctcgaactc	ctggcctcaa	gcaatccacc	60
cgctcagcc	tccaaaagt	ctgggattac	agatgtgagc	catggcacca	tgccaaaagg	120
ctatatctct	ggctctgtgt	ttccgagact	gcttttaate	ccaactctc	tacatttaga	180
ttaaaaaata	ttttattcat	ggtcaatctg	gaacataatt	actgcatctt	aagtttccac	240

tgatgtatat	agaaggctaa	aggcacaatt	tttatcaaat	ctagtagagt	aaccaaacat	300
aaaatcatta	attactttca	acttaataac	taattgacat	tcttcaaaaag	agctgttttc	360
aatcctgata	ggttctttat	tttttcaaaa	tatatttgcc	atgggatgct	aatttgcaat	420
aaggcgcata	atgagaatac	cccaaactgg	a			451

<210> 44

<211> 521

<212> DNA

<213> Homo sapien

<400> 44

ggtggacccc	cagggactgg	aaagacactt	cttgcccag	ctgtggcggg	agaagctgat	60
gttccttttt	attatgcttc	tggatccgaa	tttgatgaga	tgtttgtggg	tgtgggagcc	120
agccgtatca	gaaatctttt	tagggaagca	aaggcgaatg	ctccttgtgt	tatatttatt	180
gatgaattag	attctgttgg	tgggaagaga	attgaatctc	caatgcatcc	atattcaagg	240
cagaccataa	atcaacttct	tgctgaaatg	gatggtttta	aaoccaaata	aggagttatc	300
ataataggag	ccacaaactt	cccagaggca	ttagataatg	ccttaatacc	gtcctggctg	360
ttttgacatg	caagttacag	ttccaaggcc	agatgtaaaa	ggtcgaacag	aaattttgaa	420
atggtatctc	aataaaaataa	agtttgatca	atcccggtga	tccagaaatt	atagcctcga	480
ggtactggtg	gcttttccgg	aagcagagtt	gggagaatct	t		521

<210> 45

<211> 585

<212> DNA

<213> Homo sapien

<400> 45

gcctacaaca	tccagaaaga	gtctaccctg	cacctggtgc	tscgtctcag	aggtgggatg	60
cagatcttcg	tgaagaccct	gactggtaag	accatcactc	tcgaagtgga	gccgagtgac	120
accatygaga	acgtcaaagc	aaagatccar	gacaagggaag	gcrtycctcc	tgaccagcag	180
aggttgatct	ttgccggaaa	gcagctggaa	gatggdcgca	ccctgtctga	ctacaacatc	240
cagaaagagt	cyaccctgca	cctgggtgctc	cgtctcagag	gtgggatgca	ratcttcgtg	300
aagaccctga	ctggtaagac	catcaccttc	gaggtggagc	ccagtgcacac	catcgagaat	360
gtcaaggcaa	agatccaaga	taaggaaggc	atccctcctg	atcagcagag	gttgatcttt	420
gctgggaaac	agctggaaga	tggacgcacc	ctgtctgact	acaacatcca	gaaagagtcc	480
actctgcact	tggtcctgcg	cttgaggggg	ggtgtctaag	tttccccctt	taagggtttcm	540
acaaatttca	ttgcactttc	ctttcaataa	agttgttgca	ttccc		585

<210> 46

<211> 481

<212> DNA

<213> Homo sapien

<400> 46

gaactgggcc	ctgagcccaa	gtcatgcctt	gtgtccgcat	ctgccgtgtc	acctctgtkc	60
ctgccccctca	cccctccctc	ctggctcttc	gagccagcac	catctccaaa	tagcctattc	120
cttcttgcaa	atcacacaca	catgcggggc	acacatacct	gctgccctgg	agatggggaa	180
gtaggagaga	tgaatagagg	cccatacatt	gtacagaagg	aggggcaggt	gcagataaaa	240
gcagcagacc	cagcggcagc	tgaggtgcat	ggagcacggg	tggggccggc	attgggctga	300
gcacctgatg	ggcctcatct	cgtgaatcct	cgaggcagcg	ccacagcaga	ggagttaagt	360
ggcacctggg	ccgagcagag	caggagactg	agggtcagag	tggaggctaa	gctgccctgg	420
aactcctcaa	tcttgccctg	cccctagtat	gaagccccct	tcttgccect	acaattcctg	480
a						481

<210> 47

<211> 461
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(461)
 <223> n = A,T,C or G

<400> 47

atggatctta	ctttgccacc	caggttgag	tgcatgtctg	caatcttggc	tcaactgcagc	60
cttaacctcc	caggctcaag	ctatcctcct	gccaaagcct	tccacatagc	tgggactaca	120
ggtacacngc	caccacaccc	agctaaaatt	tttgtatttt	ttgtagagac	gggatctcgc	180
cacgttgccc	aggctggtcc	catcctgacc	tcaagcagat	ctgcccacct	cagcccccca	240
acgtgctagg	attacaggcg	tgagccaccg	caccagcct	ttgttttgct	tttaatggaa	300
tcaccagttc	ccctccgtgt	ctcagcagca	gctgtgagaa	atgctttgca	tctgtgacct	360
ttatgaagg	gaacttccat	gctgaatgag	ggtaggatta	catgctcctg	tttccgggg	420
gtcaagaaag	cctcagactc	cagcatgata	agcagggtag	g		461

<210> 48
 <211> 571
 <212> DNA
 <213> Homo sapien

<400> 48

ataggggctt	taaggaggga	attcaggttc	aatgaggtcg	taaggccagg	gctcttatcc	60
agtaagactg	gggtcccttag	atgagaaaga	gacacccgag	gtccttctct	ctgccgtgtg	120
aggatgcata	aagaaggcgg	ccgtctgcaa	gcgaaggaga	ggccgcacca	gaaaccgaca	180
ccttcattct	ggacttgtag	cctctagaac	tgagaaaata	actgtctgtt	ggtaagcca	240
cccagtttgt	agtattctct	tatggcttcc	taagcagact	aacaaacaaa	cacccaaaat	300
taactgatgg	cttcgctgtc	ttctgtaaaa	attgctatga	gagaactttt	cactcactgt	360
tttgagttt	ctccctcagt	ccctggttct	ttcttctcac	ataatcccaa	tttcaattta	420
tagttcatgg	cccaggcaga	gtcattcatc	acggcatctc	ctgagctaaa	ccagcacctg	480
ctctgctcac	ttcttgactg	gctgetcatc	atcagccctc	ttgcagagat	ttcatttcct	540
cccgtgccag	gtacttcacg	caccaagctc	a			571

<210> 49
 <211> 511
 <212> DNA
 <213> Homo sapien

<400> 49

ggataatgaa	gttggtttat	ttagcttgga	caaaaaggca	tattcctcta	ttttcttata	60
caacaaatat	ccccaaaata	aagcaagcat	atatatcttg	aatgtgtaat	aatccagtga	120
taaacaagag	cagtacttta	aaagaaaaaa	aaatatgtat	ttctgtcagg	ttaaaatgag	180
aatcaaaacc	atttactctg	ctaactcatt	atTTTTTgct	ttctTTTTgg	ttaagagagg	240
caatgcaata	cactgaaaaa	ggtttttatc	ttatctggca	ttggaattag	acatattcaa	300
accccagccc	ccattttcaa	actttaagac	cacaaacaag	taatttactt	ttctgaacat	360
tggttttttc	tggaaaatgg	gaattataaa	atagactttg	cagactctta	tgagattaaa	420
taagataatg	tatgaaattc	tttcttcttt	tttacttctt	tttcttcttt	gagatggagt	480
ctcaccccg	caccagggt	ggagtacagt	g			511

<210> 50
 <211> 561
 <212> DNA

<213> Homo sapien

<400> 50

ccactgcact	ccagcctggg	tgacggagtg	agactctgtc	tcaaaaaaac	aaacaaacaa	60
acaaacaaaa	aactgaaaag	gaaatagagt	tcctctttcc	tcataatga	atatattatt	120
tcaacagatt	gttgatcacc	taccatatgc	ttggtattgt	tctaattgct	ggggatacag	180
caagaggttc	tgcagaactt	catggagcat	gaaagtaaat	aaacaaagtt	aatttcaagg	240
ccaggcatgg	ttgctcacac	ctttagtccc	agcacttttg	gaggctgagg	cagggtggatc	300
acttgggccc	aggagttaa	ggctgcagtg	agccaagatt	gtgccactac	tctccaggct	360
gggcaacaga	gcaagaccct	gtctcagggg	gaacaaaaag	ttaatttcag	attttggttaa	420
gtgctgtaaa	ggaagtaaat	aggttgatat	tcaagagagc	acctgaaggc	caggcgtggt	480
ggctcacgcc	tgtggtctaa	cgctttggga	agcccagagc	ggcggatcac	aaggtcagga	540
gaattttggc	caggcatggt	g				561

<210> 51

<211> 451

<212> DNA

<213> Homo sapien

<400> 51

agaatccatt	tattggggtt	taaactagtt	acacaactga	aatcagtttg	gcactacttt	60
atacagggat	tacgcctgtg	tatgccgaca	cttaataact	gtaccaggac	cactgctgtg	120
cttaggtctg	tattcagtca	ttcagcatgt	agatactaaa	aataactgtg	agtgttcctt	180
taaggaagac	tgtacagggt	gtgttgcaag	atgacattca	ccaatttggt	aattatttca	240
acccagaaga	tacctttcac	tctataaact	tgtcataggc	aaacatgtgg	tgttagcatt	300
gagagatgca	cacaaaaatg	ttacataaaa	gttcagacat	tctaatagata	agtgaactga	360
aaaaaaaaaa	aaccccatat	ctcaattttt	gtaacaagat	aaagaaaata	atttaaaaaac	420
acaaaaaatg	gcattcagtg	ggtacaaagc	c			451

<210> 52

<211> 682

<212> DNA

<213> Homo sapien

<400> 52

caaatatttta	atataaatct	ttgaaacaag	ttcaqakgaa	ataaaaaatca	aagttttgcaa	60
aaacgtgaag	attaacttaa	ttgtcaaata	ttcctcattg	ccccaaatca	gtattttttt	120
tattttctatg	caaaagtatg	ccttcaaact	gcttaaatga	tatatgatat	gatacacaaa	180
ccagtttttca	aatagtaaag	ccagtcattt	tgcaattgta	agaaataggt	aaaaagattat	240
aagacacctt	acacacacac	acacacacac	acacacacgt	gtgcaccgcc	aatgacaaaa	300
aacaattttg	cctctcctaa	aataagaaca	tgaagaccct	taattgctgc	caggagggaa	360
cactgtgtca	cccctcccta	caatccaggt	agtttccttt	aatccaatag	caaactctggg	420
catatttgag	aggagtgatt	ctgacagcca	csgttgaaat	cctgtgggga	accattcatg	480
tccaccact	ggtgccctga	aaaaatgcc	ataatttttc	gtcccaactt	ctgctgctgt	540
ctcttcacac	tcctcacata	gacccagac	ccgctggccc	ctggctgggc	atcgcatgac	600
tggtagagca	agtcataagg	ctcgtctttg	acgtcacaga	agcgatacac	caaattgcct	660
ggtcggtcac	tgtcataacc	ag				682

<210> 53

<211> 311

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(311)

<223> n = A,T,C or G

<400> 53

tttgacttta	gtaggggtct	gaactattta	ttttactttg	ccmgtaatat	ttaraccyta	60
tatatctttc	attatgccat	cttatcttct	aatgbcaagg	gaacagwtgc	taamctggct	120
tctgcattwa	tcacattaaa	aatggctttc	ttggaaaatc	ttcttgatat	gaataaagga	180
tcttttavag	ccatcattta	aagcmggnnt	ctctccaaca	cgagtctgct	sasgggggk	240
gagctgtgaa	ctctggctga	aggctttccc	atacacactg	caatgacmtg	gtttctgacc	300
agbgtgagtt	a					311

<210> 54

<211> 561

<212> DNA

<213> Homo sapien

<400> 54

agagaagccc	cataaatgca	atcagtgtgg	gaaggccttc	agtcagagct	caagcctttt	60
cctccatcat	cgggttcata	ctggagagaa	accctatgta	tgtaatgaat	gcggcagagc	120
ctttggtttt	aactctcatc	ttactgaaca	cgtaaggatt	cacacaggag	aaaaacccta	180
tgtttgtaat	gagtgcggca	aagcctttcg	tcggagttcc	actcttggtc	agcatcgaag	240
agttcacact	ggggagaagc	cctaccagtg	cgttgaatgt	gggaaagctt	tcagccagag	300
ctcccagctc	accctacatc	agccgagttc	acactggaga	gaagccctat	gactgtggtg	360
actgtgggaa	ggccttcagc	cggaggtcaa	ccctcattca	gcacagaaa	gttcacagcg	420
gagagactcg	taagtgcaga	aaacatggtc	cagcctttgt	tcattggctcc	agcctcacag	480
cagatggaca	gattcccact	ggagagaagc	acggcagaac	ctttaacctat	ggtgcaaadc	540
tcattctgcg	ctggacagtt	c				561

<210> 55

<211> 811

<212> DNA

<213> Homo sapien

<400> 55

gagacaggg	ctcactttgt	cacccaggct	ggaatgcagt	ggtgcatct	tacgtagctc	60
actgcagccc	tgacctcctg	gactcaaaaca	attctcctgc	ctcagccctg	caagtaqctg	120
ggactgtggg	tgcacatgct	catgcctggc	taacttttgt	agtttttgta	aagatgggg	180
tttgccatgt	tgcacatgct	ggtcttgaac	tcctgagctc	aaacgatctg	cccacctcgg	240
cctcccagaa	tggtgggatt	acaggggtaa	accaccacgc	ctggcccat	tagggatttc	300
ttagcatcca	cttgctcact	gagattaatc	ataagagatg	ataagcactg	gaagaaaaaa	360
atttttacta	ggctttggat	atttttttcc	tttttcagct	ttatacagag	gattggatct	420
ttagttttcc	tttaactgat	aataaaacat	tgaaaggaaa	taagtttacc	tgagattcac	480
agagataacc	ggcatcactc	ccttgctcaa	ttccagtctt	taccacatca	attattttca	540
gaggtgcagg	ataaaggcct	ttagtctgct	ttcgcacttt	ttcttccact	tttttgtaaa	600
cctgttgcc	gacaaatgga	attgacagcg	tatgccatga	ctattccatt	tgacagggat	660
acgctgtcaa	tttttccacc	aatcccttgt	ctctcttttg	agagatcttc	ttatcagcta	720
gtcctttggc	aaaagtaatt	gcaacttctt	ctaggtattc	tattgtccgt	tccactgggtg	780
gaacccctgg	gaccaggact	aaaacctcca	g			811

<210> 56

<211> 591

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(591)

<223> n = A,T,C or G

<400> 56

atctcatata	tatatcttctt	cctgacttta	tttgcttgct	tctgncacgc	atttaaaata	60
tcacagagac	caaaatagag	cggctttctg	gtggaacgca	tggcagtcac	aggacaaaat	120
acaaaactag	ggggctctgt	cttctcatac	atcatacaat	tttcaagtat	tttttttatg	180
tacaaagagc	tactctatct	gaaaaaaaaa	taaaaaataa	atgagacaag	atagttttatg	240
catcctagga	agaaagaatg	ggaagaaaga	acggggcagt	tgggtacaga	ttcctgtccc	300
ctgttcccag	ggaccactac	cttcctgcca	ctgagttccc	ccacagcctc	acccatcatg	360
tcacagggca	agtgccaggg	taggtgggga	ccagtggaga	caggaaccag	caacatactt	420
tggcctggaa	gataaggaga	aagtctcaga	aacacactgg	tgggaagcaa	tcccacnggc	480
cgtgccccan	gagcttccca	cctgctgctg	gctccctggg	tggctttggg	aacagcttgg	540
gcaggccctt	ttgggtgggg	nccaactggg	cctttggggc	cgtgtggaaa	g	591

<210> 57

<211> 481

<212> DNA

<213> Homo sapien

<400> 57

aaacattgag	atggaatgat	agggtttccc	agaatcaggt	ccatatttta	actaaatgaa	60
aattatgatt	tatagccttc	tcaaatacct	gccatacttg	atatctcaac	cagagctaat	120
tttacctctt	tacaaattaa	ataagcaagt	aactggatcc	acaatttata	atacctgtca	180
atTTTTTctg	tattaaacct	ctatcatagt	ttaagcctat	tagggtagctt	aatccttaca	240
aataaacagg	tttaaaatca	cctcaatagg	caactgccct	tctggttttc	ttctttgact	300
aaacaatctg	aatgcttaag	attttccact	ttgggtgcta	gcagtacaca	gtgttacact	360
ctgtattcca	gacttcttaa	attatagaaa	aaggaatgta	cactttttgt	attctttctg	420
agcagggccg	ggaggcaaca	tcattctacca	tggtagggac	ttgtatgcat	ggactacttt	480
a						481

<210> 58

<211> 141

<212> DNA

<213> Homo sapien

<400> 58

actctgtcgc	ccaggctgga	gcccabtggm	gcgatctcga	ctccctgcaa	gctmcgcctc	60
acaggwtcat	gccattctcc	tgctcagca	tctggagtag	ctgggactac	aggcgccagc	120
caccatgccc	agctaatttt	t				141

<210> 59

<211> 191

<212> DNA

<213> Homo sapien

<400> 59

accttaaaga	cataggagaa	tttatactgg	gagagaaagc	ttacaaatgt	aaggtttctg	60
acaagacttg	ggagtgttc	acacctggaa	caacatactg	gacttcacac	tggabagaaa	120
ccttacaagt	gtaatgagt	tggcaaagcc	tttggaagc	agtcaacact	tattcaccat	180
caggcaattc	a					191

<210> 60

<211> 480

<212> DNA

<213> Homo sapien

<400> 60

agtcaggatc	atgatggctc	agtttccac	agcgatgaat	ggagggccaa	atatgtgggc	60
tattacatct	gaagaacgta	ctaagcatga	taaacagttt	gataacctca	aaccttcagg	120
aggttacata	acaggtgatc	aagcccgtac	ttttttccta	cagtcaggtc	tgccggcccc	180
ggtttttagct	gaaatatggg	ccttatcaga	tctgaacaag	gatgggaaga	tggaccagca	240
agagttctct	atagctatga	aactcatcaa	gttaaagttg	cagggccaac	agctgcctgt	300
agtcctccct	cctatcatga	aacaaccccc	tatgttctct	ccactaatct	ctgctcgttt	360
tgggatggga	agcatgccca	atctgtccat	tcatcagcca	ttgcctccag	ttgcacctat	420
agcaacaccc	ttgtcttctg	ctacttcagg	gaccagtatt	cctccctaata	gatgcctgct	480

<210> 61

<211> 381

<212> DNA

<213> Homo sapien

<400> 61

ctttcgatth	ccttcaatth	gtcacgthth	atthttatgaa	gttgthtcaag	ggctaactgc	60
tgtgtattat	agctthtctct	gagthtcttc	agctgattgt	taaataaatc	cattthtctgag	120
agcttagatg	cagthtctth	ttcaagagca	tctaattgtt	ctthtaagtct	ttggcataat	180
tcttctctth	ctgatgactt	tctatgaagt	aaactgatcc	ctgaatcagg	tgtgttactg	240
agctgcatgt	ttthtaattct	ttcgthtaat	agctgcttct	cagggaccag	atagataagc	300
ttattthtgat	attccttaag	ctcttggtga	agthgttcga	tttccataat	ttccaggtca	360
cactggttat	cccaaacttc	t				381

<210> 62

<211> 906

<212> DNA

<213> Homo sapien

<400> 62

gtggaggtga	aacggaggca	agaaaggggg	ctacctcagg	agcgaggggac	aaagggggcg	60
tgaggcacct	aggccgcggc	accccggcga	caggaagccg	tcctgaaccg	ggctaccggg	120
taggggaagg	gcccgcgtag	tcctcgacag	gccccagagc	tggagtcggc	tccacagccc	180
cgggcgcgtc	gcttctcaat	tcctggacct	ccccggcgcc	cgggcctgag	gactggctcg	240
gcgaggaggag	aagaggaaac	agacttgagc	agctccccgt	tgtctcgcaa	ctccactgcc	300
gaggaactct	catttcttcc	ctcgtctcct	cacccccac	ctcatgtaga	aaggtgctga	360
agcgtccgga	gggaagaaga	acctgggcta	ccgtcctggc	cttccmccc	ccttcccggg	420
gcgctttggt	gggcgtggag	ttgggggttg	gggggtgggt	gggggttctt	ttttggagtg	480
ctggggaact	ttttccctt	cttcagggtca	ggggaaagg	aatgcccaat	tcagagagac	540
atgggggcaa	gaaggacggg	agtggaggag	cttctggaac	tttgacggcg	tcacggggag	600
gcggcagctc	taacagcaga	gagcgtcacc	gcttggtatc	gaagcacaag	cggcataagt	660
ccaaacactc	caaagacatg	gggttggtga	ccccgaagc	agcatccctg	ggcacagtta	720
tcaaaccttt	ggtggagtat	gatgatatac	gctctgattc	cgacaccttc	tccgatgaca	780
tggccttcaa	actagaccga	agggagaacg	acgaacgtcg	tggatcagat	cggagcgacc	840
gcctgcacaa	acatcgtcac	caccagcaca	ggcgttccc	ggacttacta	aaagctaaac	900
agaccg						906

<210> 63

<211> 491

<212> DNA

<213> Homo sapien

<400> 63

gacatgtttg	cctgcagggg	accagagaca	atgggattag	ccagtgtctca	ctgttcttta	60
tgcttccaga	gaggatggg	acagctctca	ggtcagaatc	caggctgaga	aggccatgct	120
ggttgggggc	ccccggaagc	acggtcggga	tcctccctgg	catcagcgta	gacccgctgc	180
tcaggcttgg	ggtaccaaac	tcattgctctg	tactgttttg	gccccatgcg	gtgagaggaa	240
aacctagaaa	aagattggtc	gtgctaagga	atcagctgcc	ccctcatcct	ccgcatccaa	300
tgctggtgac	aacatattcc	ctctcccagg	acacagactc	ggtgactcca	cactgggctg	360
agtggcctct	ggaggctcgt	ggcctaaggc	agggctccgt	aaggctgatc	ggctgaactg	420
ggtgggggtga	gggtttctga	cccttcgctt	cccatcccat	aaccgctgtc	aatgagctca	480
cactgtggtc	a					491

<210> 64

<211> 511

<212> DNA

<213> Homo sapien

<400> 64

gatggcatgg	tcgttgctaa	tgtgcctgct	gggatggagc	acttcctcct	gtgagcccag	60
gggacccgcc	tgtccctgga	gcttggggca	aggaggggaag	agtgatacca	ggaaggtggg	120
gctgcagcca	ggggccagag	tcagttcagg	gagtggtcct	cggccctcaa	agtcctccg	180
gggactgctc	aggagtgatg	gtgccctgga	gtttgcccc	acttccttgg	ccaccctgga	240
aggtgcctgg	ctgctccagg	cctctaggct	gggctgatgg	gtttctccag	gacacaagta	300
tcattaaagc	caccctctcc	tcagcttgct	aggccgcaca	tgtgggacag	gctgtgctca	360
caacccccctc	gcctgccctg	ccctccatca	ggaggagcca	gtggaacctt	cggaaagctc	420
ccagcatctc	agcagccctc	aaaagtcgtc	ctggggcaag	ctctggttct	cctgactgga	480
ggtcatctgg	gcttggcctg	ctctctctcg	c			511

<210> 65

<211> 394

<212> DNA

<213> Homo sapien

<400> 65

taaaaaagtg	taacaaaggt	ttattttagac	tttcttcatg	ccccagatc	caggatgtct	60
atqtaaaccg	ttatcttaca	aagaaagcac	aatatttggt	ataaactaag	tcagtgactt	120
gcttaactga	aatagcgtcc	atccaaaagt	gggtttaagg	taaaactacc	tgacgatatt	180
ggcggggcatc	ctgcagtttg	gactgcttgc	cgggtttgtc	cagggttccg	ggtctgttct	240
tggcactcat	ggggacaggc	atcctgctcg	tctgtggggc	cccgtggag	cccttacgtg	300
aagctgaagg	tatcgaccst	agggggctct	agggcagtgg	gaccttcac	cggaaactaac	360
aagggtcggg	gagaggcctc	ttgggctatg	tggg			394

<210> 66

<211> 359

<212> DNA

<213> Homo sapien

<400> 66

caagcgttcc	tttatggatg	taaattcaaa	cagtcattgct	gagccatccc	gggctgacag	60
tcacgttwaa	gacactagg	cgggcgccac	agtgccaccc	aaggagaaga	agaatttgga	120
atTTTTccat	gaagatgtac	ggaaatctga	tgttgaatat	gaaaatggcc	cccaaagtga	180
attccaaaag	gttaccacag	gggctgtaag	acctagtac	cctcctaagt	gggaaagagg	240
aatggagaat	agtatttctg	atgcatcaag	aacatcagaa	tataaaactg	agatcataat	300
gaaggaaaaat	tccatatcca	atatgagttt	actcagagac	agtagaaact	attcccagg	359

<210> 67

<211> 450

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(450)

<223> n = A,T,C or G

<400> 67

taggaataac	aaatgtttat	tcagaaatgg	ataagtaata	cataatcacc	cttcatctct	60
taatgccct	tcctctcctt	ctgcacagga	gacacagatg	ggtaacatag	aggcatggga	120
agtggaggag	gacacaggac	tagcccacca	ccttctcttc	ccggtctccc	aagatgactg	180
cttatagagt	ggaggaggca	aacagggtccc	ctcaatgtac	cagatgggtca	cctatagcac	240
cagctccaga	tggccacgtg	gttgacagctg	gactcaatga	aactctgtga	caaccagaag	300
atacctgcctt	tgggatgaga	gggaggataa	agccatgcag	ggaggatatt	taccatccct	360
accctaagca	cagtgcaagc	agtgcagccc	cggctccag	tacctgaaaa	accaaggcct	420
actgnctttt	ggatgctctc	ttggggccacg				450

<210> 68

<211> 511

<212> DNA

<213> Homo sapien

<400> 68

aagcctcctg	ccctggaaat	ctggagcccc	ttggagctga	gctggacggg	gcagggaggg	60
gctgagaggc	aagaccgtct	ccctcctgct	gcagctgctt	ccccagcagc	cactgctggg	120
cacagcagaa	acgccagcag	agaaaaatggg	agccgagagt	ccttagccct	ggagctgagg	180
ctgcctctgg	gctgacccgc	tggctgtacg	tggccagaac	tgggggtggc	atctggcatc	240
catttgaggc	caggggtggag	gaaaggggagg	ccaacagagg	aaaacctatt	cctgctgtga	300
caacacagcc	cttgtcccac	gcagcctaag	tgcagggagc	gtgatgaagt	caggcagcca	360
gtcggggagg	acgaggtaac	tcagcagcaa	tgtcaccttg	tagcctatgc	gctcaatggc	420
ccggaggggc	agcaaccccc	cgcacacgtc	agccaacagc	agtgcctctg	caggcaccaa	480
gagagcgatg	atggacttga	gcgccgtgtt	c			511

<210> 69

<211> 511

<212> DNA

<213> Homo sapien

<400> 69

gtttggcaga	agacatgttt	aataacattt	tcatatattaa	aaaatacagc	aacaattctc	60
tatctgtcca	ccatcttgcc	ttgcccttcc	tggggctgag	gcagacaaaag	gaaaggtaat	120
gaggttaggg	ccccaggcg	ggctaagtgc	tattggcctg	ctcctgctca	aagagagcca	180
tagccagctg	ggcacggccc	cctagcccct	ccaggttgct	gaggcggcag	cgggtggtaga	240
gttcttcact	gagccgtggg	ctgcagtctc	gcagggagaa	cttctgcacc	agccctggct	300
ctacggcccc	aaagaggtgg	agccctgaga	accggaggaa	aacatccatc	acctccagcc	360
cctccagggc	ttcctcctct	tcctggcctg	ccagttcacc	tgccagccgg	gctcggggccg	420
ccaggtagtc	agcgtttag	aagcagccct	ccgcagaagc	ctgccgggtca	aatctccccg	480
ctataggagc	ccccggggag	gggtcagcac	c			511

<210> 70

<211> 511

<212> DNA

<213> Homo sapien

<400> 70

caagttgaac	gtcaggcttg	gcagaggttg	agtgtagatg	aaaacaaagg	tgtgattatg	60
aagaggatgt	gagtcctttg	ggtgtaggag	agaaaggctg	ttgagcttct	atttcaagat	120
acttttacct	gtgcaaaaag	cacattttcc	acctccttct	catggcattt	gtgtaagggt	180
agtatgattc	ctattccatc	tgcatttttag	aggtgaagaa	taacgtacaa	gggattcagt	240
gattagcaag	ggacccctca	ctaagtgttg	atggagttag	gacagagctc	agctgtttga	300
atctcagagc	ccaggcagct	ggagctgggt	aggatcctgg	agctggcact	aatgtgaggt	360
gcattccctc	caaccagagc	tcagatccgg	aacctgaccg	tgctgacccc	cgaaggggag	420
gcagggctga	gctggcccgt	tgggctccct	gctcctttca	caccacactc	tcgctttgag	480
gtgctgggct	gggactactt	cacagagcag	c			511

<210> 71

<211> 511

<212> DNA

<213> Homo sapien

<400> 71

tggcctgggc	aggattggga	gagaggtagc	tacccggatg	cagtcctttg	ggatgaagac	60
tatagggtat	gaccccatca	tttccccaga	ggtctcgccc	tcctttggtg	ttcagcagct	120
gcccctggag	gagatctggc	ctctctgtga	tttcatcact	gtgcacactc	ctctcctgcc	180
ctccacgaca	ggcttgctga	atgacaacac	ctttgccag	tgcaagaagg	gggtgcgtgt	240
ggtgaactgt	gcccgtggag	ggatcgtgga	cgaaggcgcc	ctgctccggg	ccctgcagtc	300
tggccagtgt	gccggggctg	cactggacgt	gtttacggaa	gagccgccac	gggaccgggc	360
cttggtggac	catgagaatg	tcatcagctg	tccccacctg	ggtgccagca	ccaaggaggc	420
tcagagccgc	tgtggggagg	aaattgctgt	tcagttcgtg	gacatggtga	aggggaaatc	480
tctcacgggg	gttgtgaatg	cccaggccct	t			511

<210> 72

<211> 2017

<212> DNA

<213> Homo sapien

<400> 72

agccagatgg	ctgagagctg	caagaagaag	tcaggatcat	gatggctcag	tttcccacag	60
cgatgaatgg	agggccaaat	atgtgggcta	ttacatctga	agaacgtact	aagcatgata	120
aacagtttga	taacctcaaa	ccttcaggag	gttacataac	aggtgatcaa	gcccgtactt	180
ttttcctaca	gtcaggctctg	ccggccccgg	ttttagctga	aatatggggc	ttatcagatc	240
tgaacaagga	tgggaagatg	gaccagcaag	agttctctat	agctatgaaa	ctcatcaagt	300
taaagttgca	gggccaacag	ctgcctgtag	tcctccctcc	tatcatgaaa	caaccccccta	360
tgttctctcc	actaatctct	gctcgttttg	ggatgggaag	catgcccaat	ctgtccattc	420
atcagccatt	gcctccagtt	gcacctatag	caacaccctt	gtcttctgct	acttcaggga	480
ccagtattcc	tcccctaattg	atgcctgctc	ccctagtgcc	ttctgttagt	acatcctcat	540
taccaaattgg	aactgccagt	ctcattcagc	ctttatccat	tccttattct	tcttcaacat	600
tgcctcatgc	atcatcttac	agcctgatga	tgggaggatt	tggtggtgct	agtatccaga	660
aggcccagtc	tctgattgat	ttaggatcta	gtagctcaac	ttcctcaact	gcttccctct	720
cagggaactc	acctaagaca	gggacctcag	agtgggcagt	tcctcagcct	tcaagattaa	780
agtatcggca	aaaattttaat	agtctagaca	aaggcatgag	cggataacctc	tcagggttttc	840
aagctagaaa	tgcccttctt	cagtcaaata	tctctcaaac	tcagctagct	actatttgga	900
ctctggctga	catcgatggg	gacggacagt	tgaagactga	agaattttatt	ctggcgatgc	960
acctcactga	catggccaaa	gctggacagc	cactaccact	gacgttgccct	cccagacttg	1020
tccttccatc	tttcagaggg	ggaaagcaag	ttgattctgt	taatggaact	ctgccttcat	1080
atcagaaaac	acaagaagaa	gagcctcaga	agaaactgcc	agttactttt	gaggacaaac	1140
ggaaagccaa	ctatgaacga	ggaaacatgg	agctggagaa	gcgacgccaa	gtgttgatgg	1200
agcagcagca	gagggagggt	gaacgcaaa	cccagaaaaga	gaaggaagag	tgggagcgga	1260
aacagagaga	actgcaagag	caagaatgga	agaagcagct	ggagttggag	aaacgcttgg	1320

agaaacagag	agagctggag	agacagcggg	aggaagagag	gagaaaggag	atagaaagac	1380
gagaggcagc	aaaacaggag	cttgagagac	aacgccgttt	agaatgggaa	agactccgtc	1440
ggcaggagct	gctcagtcag	aagaccaggg	aacaagaaga	cattgtcagg	ctgagctcca	1500
gaaagaaaaa	tctccacctg	gaactggaag	cagtgaatgg	aaaacatcag	cagatctcag	1560
gcagactaca	agatgtccaa	atcagaaaagc	aaacacaaaa	gactgagcta	gaagttttgg	1620
ataaacagtg	tgacctggaa	attatggaaa	tcaaacaact	tcaacaagag	cttaaggaat	1680
atcaaaataa	gcttatctat	ctggctccctg	agaagcagct	attaaacgaa	agaattaaaa	1740
acatgcagct	cagtaacaca	cctgattcag	ggatcagttt	acttcataaa	aagtcacatcag	1800
aaaaggaaga	attatgccaa	agactttaaag	aacaattaga	tgctcttgaa	aaagaaactg	1860
catctaagct	ctcagaaatg	gattcattta	acaatcagct	gaaggaactc	agagaaagct	1920
ataatacaca	gcagttagcc	cttgaacaac	ttcataaaat	caaacgtgac	aaattgaagg	1980
aatcgaag	aaaaagatta	gagcaaaaaa	aaaaaaa			2017

<210> 73

<211> 414

<212> DNA

<213> Homo sapien

<400> 73

atggcagtga	cattcaccat	catgggaacc	accttccctt	ttcttcagga	ttctctgtag	60
tggaagagag	caccagtggt	tgggctgaaa	acatctgaaa	gtagggagaa	gaacctaaaa	120
taatcagtar	ctcagagggc	tctaagggtgc	caagaagtct	cactggacat	ttaagtgccaa	180
acaaaggcat	actttcggaa	tcgccaagtc	aaaactttct	aactttctgtc	tctctcagag	240
acaagtgaga	ctcaagagtc	tactgcttta	gtggcaacta	cagaaaactg	gtgttaccca	300
gaaaaacagg	agcaattaga	aatgggtcca	atatttcaaa	gctccgcaaa	caggatgtgc	360
tttcctttgc	ccatttaggg	tttcttctct	ttcctttctc	tttattaacc	acta	414

<210> 74

<211> 1567

<212> DNA

<213> Homo sapien

<400> 74

atatctagaa	gtctggagtg	agcaaacaag	agcaagaaac	aaaaagaagc	caaaagcaga	60
aggctccaat	atgaacaaga	taaatctatc	ttcaaagaca	tattagaagt	tgggaaaata	120
attcatgtga	actagacaag	tgtgttaaqa	gtgataagta	aaatgcacgt	ggagacaagt	180
gcactccccg	atctcaggga	cctccccctg	cctgtcacct	ggggagttag	aggacaggat	240
agtgcatgtt	ctttgtctct	gaatttttag	ttatatgtgc	tgtaatgttg	ctctgaggaa	300
gccccctggaa	agtctatccc	aacatatcca	catcttatat	tccacaaatt	aagctgtagt	360
atgtacccta	agacgtctgt	aattgactgc	cacttcgcaa	ctcaggggcg	gctgcatttt	420
agtaatgggt	caaatgattc	acttttttatg	atgcttccaa	aggtgccttg	gcttctcttc	480
ccaactgaca	aatgccaaag	ttgagaaaaa	tgatcataat	tttagcataa	acagagcagt	540
cggcgacacc	gattttataa	ataaactgag	caccttcttt	ttaaacaaac	aaatgcgggt	600
ttattttctca	gatgatgttc	atccgtgaat	ggtccaggga	aggacctttc	accttgacta	660
tatggcatta	tgatcatcaca	agctctgagg	cttctccttt	ccatcctgcg	tggacagcta	720
agacctcagt	tttcaatagc	atctagagca	gtgggactca	gctgggggtga	tttcgcccc	780
catctccggg	ggaatgtctg	aagacaattt	tgttacctca	atgagggagt	ggaggaggat	840
acagtgtctac	taccaactag	tggataaagg	ccagggatgc	tgctcaacct	cctaccatgt	900
acaggagctc	tccccattac	aactacccaa	tccgaagtgt	caactgtgtc	aggactaaga	960
aacctgggtt	ttgagtagaa	aagggcctgg	aaagagggga	gccaacaaat	ctgtctgtct	1020
cctcacatta	gtcatctggca	aataagcatt	ctgtctcttt	ggctgtctgc	tcagcacaga	1080
gagccagaac	tctatcgggc	accaggataa	catctctcag	tgaacagagt	tgacaaggcc	1140
tatgggaaat	gcctgatggg	attatcttca	gcttgttgag	cttctaagtt	tctttccctt	1200
cattctaccc	tgcaagccaa	gttctgtaag	agaaatgcct	gagttctagc	tcaggttttc	1260
ttactctgaa	tttagatctc	cagacccttc	ctggccacaa	ttcaaattaa	ggcaacaaac	1320

atataccttc	catgaagcac	acacagactt	ttgaaagcaa	ggacaatgac	tgcttgaatt	1380
gaggccttga	ggaatgaagc	tttgaaggaa	aagaatactt	tgtttccagc	ccccttccca	1440
cactcttcat	gtgttaacca	ctgccttctc	ggaccttgga	gccacggtga	ctgtattaca	1500
tgttgttata	gaaaactgat	tttagagttc	tgatcgttca	agagaatgat	taaatataca	1560
tttccta						1567

<210> 75
 <211> 240
 <212> DNA
 <213> Homo sapien

<400> 75						
tcgagcggcc	gcccgggcag	gtccttcaga	cttggactgt	gtcacactgc	caggcttcca	60
gggctccaac	ttgcagacgg	cctgttggtg	gacagtctct	gtaatcgcca	aagcaaccat	120
ggaagacctg	ggggaaaaca	ccatggtttt	atccacctg	agatctttga	acaacttcat	180
ctctcagcgt	gcggagggag	gctctggact	ggatatttct	acctcggccg	cgaccacgct	240

<210> 76
 <211> 330
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(330)
 <223> n = A,T,C or G

<400> 76						
tagcgyggtc	gcggccgagg	yctgcttytc	tgtccagccc	agggcctgtg	gggtcagggc	60
ggtgggtgca	gatggcatcc	actccggtgg	cttccccatc	tttctctggc	ctgagcaagg	120
tcagcctgca	gccagagtac	agagggccaa	cactggtgtt	cttgaacaag	ggccttagca	180
ggcctgaag	grccctctct	gtagtgttga	acttctctga	gccaggccac	atgttctctc	240
cataccgcag	gytagygatg	gtgaagttga	gggtgaaata	gtattmangr	agatggctgg	300
caracctgcc	cgggcgggccg	ctcsaaatcc				330

<210> 77
 <211> 361
 <212> DNA
 <213> Homo sapien

<400> 77						
agcgtgggtc	cgggccgagg	gtccttcagg	gtctgcttat	gcccttggtc	aagaacacca	60
gtgtcagctc	tctgtactct	ggttgacagc	tgaccttgct	caggcctgag	aaggatgggg	120
cagccaccag	agtggatgct	gtctgcaccc	atcgctctga	ccccaaaagc	cctggactgg	180
acagagagcg	gctgtactgg	aagctgagcc	agctgaccca	cggcatact	gagctggggc	240
cctacaccct	ggacagggac	agtctctatg	tcaatggttt	cacccatcgg	agctctgtac	300
ccaccaccag	caccgggggtg	gtcagcgagg	agccattcaa	cctgcccggg	cggccgctcg	360
a						361

<210> 78
 <211> 356
 <212> DNA
 <213> Homo sapien

<220>

<221> misc_feature
 <222> (1)...(356)
 <223> n = A,T,C or G

<400> 78

ttggggnttt	mgagcggccg	cccgggcagg	taccgggggtg	gtcagcgagg	agccattcac	60
actgaacttc	accatcaaca	acctgcggta	tgaggagaac	atgcagcacc	ctggctccag	120
gaagttcaac	accacggaga	gggtccttca	gggcctgctc	aggtccctgt	tcaagagcac	180
cagtgttggc	cctctgtact	ctggctgcag	actgactttg	ctcagacttg	agaaacatgg	240
ggcagccact	ggagtggacg	ccatctgcac	cctccgcctt	gatcccactg	gtcctggact	300
ggacagagag	cggctatact	gggagctgag	ccagtcctct	ggcggngacn	ccnctt	356

<210> 79
 <211> 226
 <212> DNA
 <213> Homo sapien

<400> 79

agcgtgggtcg	cggccgaggt	ccagtcgcag	catgctcttt	ctcctgcccc	ctggcacagt	60
gaggaagatc	tctgtgtgta	gtgagaaggc	tgcatccac	tgagatggca	gtcaaaagtg	120
catttaatac	acctaacgta	tcgaacatca	tagcttggcc	caggttatct	catatgtgct	180
cagaacactt	acaatagcct	gcagacctgc	ccgggcggcc	gctcga		226

<210> 80
 <211> 444
 <212> DNA
 <213> Homo sapien

<220>

<221> misc_feature
 <222> (1)...(444)
 <223> n = A,T,C or G

<400> 80

tgtggtgttg	aacttcctgg	agncagggtg	acccatgtcc	tccccatact	gcaggttggt	60
gatggtgaag	ttgagggtga	atggtaccag	gagagggcca	gcagccataa	ttgtsgrgck	120
gsmgmssgag	gmwggwgtyy	cwgaggttcy	rarrtccact	gtggagggtcc	caggagtgt	180
ggtggtgggc	acagagstcy	gatgggtgaa	accattgaca	tagagactgt	tcctgtccag	240
ggtgtagggg	cccagctctt	yragtgcatt	ggycagttkg	ctyagctccc	agtacagccr	300
ctctckgyyg	mgwccagsgc	ttttggggtc	aagatgatgg	atgcagatgg	catccactcc	360
agtggctgct	ccatccttct	cggacctgag	agaggtcagt	ctgcagccag	agtacagagg	420
gccaacactg	gtgttctttg	aata				444

<210> 81
 <211> 310
 <212> DNA
 <213> Homo sapien

<400> 81

tcgagcggcc	gcccgggcag	gtcaggaagc	acattggctc	tagagccact	gcctcctgga	60
ttccacctgt	gctgcggaca	tctccaggga	gtgcagaagg	gaagcaggtc	aaactgctca	120
gatcagtcag	actggctgtt	ctcagttctc	acctgagcaa	ggtcagtctg	cagccagagt	180
acagagggcc	aacactgggtg	ttcttgaaca	agggcttgag	cagaccctgc	agaaccctct	240
tccgtggtgt	tgaacttctt	ggaaaccagg	gtgttgcatg	tttttctctc	taatgcaagg	300
ttggtgatgg						310

<210> 82
<211> 571
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(571)
<223> n = A,T,C or G

<400> 82
acggtttcaa tggacacttt tattgtttac ttaatggatc atcaattttg tctcactacc 60
tacaaatgga attcatcttt gtttccatgc tgagtagtga aacagtgcac aagctaataca 120
taataacctta catcaaaaaga gaactaagct aacactgctc actttctttt taacaggcaa 180
aatataaata tatgcactct anaatgcaca atggtttagt cactaaaaaa ttcaaattggg 240
atcttgaaga atgtatgcaa atccagggtg cagtgaagat gagctgagat gctgtgcaac 300
tgtttaagggt ttcttggcac tgcattctct ggccactagc tgaatcttga catggaagggt 360
tttagctaata gccaaagtga gatgcagaaa atgctaagtt gacttagggg ctgtgcacag 420
gaactaaaag gcaggaaagt actaaatatt gctgagagca tccaccccag gaaggacttt 480
accttccagg agctccaaac tggcaccacc cccagtgtc acatggctga ctttatectc 540
cgtgttccat ttggcacagc aagtggcagt g 571

<210> 83
<211> 551
<212> DNA
<213> Homo sapien

<400> 83
aaggctggtg ggtttttgat cctgctggag aacctccgct ttcattgtga ggaagaagggt 60
aagggaagaag atgcttcttg gaacaagggt aaagccgagc cagccaaaat agaagctttc 120
cgagcttcac tttccaagct aggggatgtc tatgtcaatg atgcttttgg cactgctcac 180
agagcccaca gctccatggt aggagtcaat ctgccacaga aggctggtgg gttttttgatg 240
aagaaggagc tgaactactt tgcaaaggcc ttggagagcc cagagcgacc cttcctggcc 300
atcctgggag gagctaaagt tgcagacaag atccagctca tcaataatat gctggacaaa 360
gtcaatgaga tgattatttg tgggtggaat gcttttacct tccttaagggt gctcaacaac 420
atggagattg gcacttctct gtttgatgaa gagggagcca agattgtcaa agacctaattg 480
tccaaagctg agaagaatgg tgtgaagatt accttgacct ttgactttgt cactgctgac 540
aagtttgatg a 551

<210> 84
<211> 571
<212> DNA
<213> Homo sapien

<400> 84
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taagttctga ttccaactta gctaattcat tctgagaact gtggtatagg tggcgtgtct 120
cttctagctg ggacaaaagt tctttgtttt cccctgtag agtatcacag accttctgct 180
gaagctggac ctctgtcttg gccttggaact cccaaatctg ctgtgcatgt tcaagcctgg 240
aaatgttaatt cttaattct tccatatgga tggacatctg tctaagttga tccttttagaa 300
cactgcaatt atcttctttg agtctaattt cttcttcttt gctttgaatc gcatcactaa 360
acttctcttc ccatttctta gcttcatcta tcacctgtc acgatcatcc tggaggggaag 420
acatgctctt agtaaaggct gcaagctggg tcacagtact gtccaagttt tcctgaagtt 480
gctgaacttc cttgtctttc ttgttcaaag taacctgaat ctctccaatt gtctcttcca 540

agtggacttt ttctctgccc aaagcatcca g

571

<210> 85
<211> 561
<212> DNA
<213> Homo sapien

<400> 85

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aatcaaagga	ttcagcatgt	ggtggaagct	gtgaggcaag	agaaacaaga	actgtatggc	120
aagttaagaa	gcacagaggc	aaacaagaag	gagacagaaa	agcagttgca	ggaagctgag	180
caagaaatgg	aggaaatgaa	agaaaagatg	agaaaagttg	ctaaatctaa	acagcagaaa	240
atcctagagc	tggaagaaga	gaatgaccgg	cttagggcag	aggtgcaccc	tgaggagat	300
acagctaaag	agtgtatgga	aacacttctt	tcttccaatg	ccagcatgaa	ggaagaactt	360
gaaaggggtca	aaatggagta	tgaaaccctt	tctaagaagt	ttcagtcctt	aatgtctgag	420
aaagactctc	taagtgaaga	ggttcaagat	ttaaagcatc	agatagaagg	taatgtatct	480
aaacaagcta	acctagaggc	caccgagaaa	catgataacc	aaacgaatgt	caatgaagag	540
ggaacacagt	ctataccagg	t				561

<210> 86
<211> 795
<212> DNA
<213> Homo sapien

<400> 86

aagccaataa	tcaccattta	ttacttaata	tatgccaaacc	actgtacttg	gcagttcaca	60
aattctcacc	gttacaacaa	ccccatgagg	tattttattcc	cattctatag	atagggaac	120
cacagctcaa	gtaagttagg	aaactgagcc	aagtatacac	agaatacgaa	gtggcaaac	180
tagaaggaaa	gactgacact	gctatctgct	ggcctccagt	gtcctggctc	ttttcacacg	240
ggttcaatgt	ctccagcgct	gctgctgctg	ctgcattacc	atgccctcat	tgtttttctt	300
cctctggtgt	tcaactgcat	ccttcaaaqa	atctaactca	ttccagagac	cacttatttc	360
tttctctctt	tctgaaatta	cttttaataa	ttcttcatga	gggggaaaag	aagatgcctg	420
ttggtagttt	tggtgtttta	gctgctcaat	ttgggactta	aacaatttgt	tttcatcttg	480
tacatcctgt	aacagctgtg	ttttgctaga	aagatcactc	tccctctctt	ttagcatggc	540
ttctaaccct	ttcaattcat	tttctttttc	tttcaacaca	atctcaagtt	cttcaaactg	600
tgatgcagaa	gaggcctctt	tcaagttatg	ttgtgctact	tcttgaacat	gtgcttttaa	660
agattcattt	tcttcttgaa	gatcctgtaa	ccacttccct	gtattggcta	ggtctttctc	720
tttctcttcc	aaaacagcct	tcatgggtatt	catctgttcc	tcttttcctt	ttaataagtt	780
caggagcttc	agaac					795

<210> 87
<211> 594
<212> DNA
<213> Homo sapien

<400> 87

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aatagccaat	ggctgggtat	attttcagaa	aacatgatta	gactaattca	ttaatgggtg	180
cttcaagctt	ttccttattg	gctccagaaa	attcaccac	cttttgtccc	ttcttaaaaa	240
actggaatgt	tggtcatgcat	ttgacttcac	actctgaagc	aacatcctga	cagtcattcca	300
catctacttc	aaggaatatc	acgttggaat	acttttcaga	gagggaatga	aagaaaggct	360
tgatcatttt	gcaaggccca	caccacgtgg	ctgagaagtc	aactactaca	agtttatcac	420
ctgcagcgtc	caaggcttcc	tgaaaagcag	tcttgctctc	gatctgcttc	accatcttgg	480
ctgctggagt	ctgacgagcg	gctgtaagga	ccgatggaaa	tggtatccaa	gcaccaaaaa	540

gagcttcaag actcgctgct tggcttgaat tcggatccga tatcgccatg gcct 594

<210> 88

<211> 557

<212> DNA

<213> Homo sapien

<400> 88

aagtgttagc	attaatgttt	tattgtcacg	cagatggcaa	ctggggtttat	gtcttcatat	60
tttatatatt	tgtaaattaa	aaaaattmca	agttttaaat	agccaatggc	tggttatatt	120
ttcagaaaac	atgattagac	taattcatta	atggtggctt	caagcttttc	cttattggct	180
ccagaaaatt	cacccacctt	ttgtcccttc	ttaaaaaact	ggaatgttgg	catgcatttg	240
acttcacact	ctgaagcaac	atcctgacag	tcattccacat	ctacttcaag	gaatatcacg	300
ttggaatact	tttcagagag	ggaatgaaag	aaaggcttga	tcattttgca	aggcccacac	360
cacgtggctg	agaagtcaac	tactacaagt	ttatcacctg	cagcgtccaa	ggcttcctga	420
aaagcagtct	tgctctcgat	ctgcttcacc	atcttggctg	ctggagtctg	acgagcggct	480
gtaaggaccg	atggaaatgg	atccaaagca	ccaaacagag	cttcaagact	cgctgcttgg	540
catgaattcg	gatccga					557

<210> 89

<211> 561

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(561)

<223> n = A,T,C or G

<400> 89

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gcacctggcc	acagggtcca	ctgaaacggg	gaggggatgg	cagcttgtaa	tgtggctttt	120
gccacaaccc	ccttctgaca	gggaaggcct	tagattgagg	ccccacctcc	catggtgatg	180
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cagcagctgt	ctcaaggctg	ggtcctctca	aggggcgtcc	cagcgcgggg	cctccctgcg	360
caaacacttg	gtacccctgg	ctgcgcagcg	gaagccagca	ggacagcagt	ggcgccgatc	420
agcacaacag	acgccttggc	ggtagggaca	gcaggcccag	ccctgtcggg	tgtctcggca	480
gcagggtctg	ttatcatggc	agaagtgtcc	ttcccacact	tcacgtcctt	cacaccacag	540
tganggctac	nggccaggaa	g				561

<210> 90

<211> 561

<212> DNA

<213> Homo sapien

<400> 90

cccgtgggtg	ccatccacgg	agttgttacc	tgatcttttg	aagcaggatc	gcccgtctgc	60
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gaaggggacg	caactggaag	tccctgagac	ggtaaagatg	caggagtggc	cggcagagca	180
gtgggcatca	acctggcagg	ggccaccacg	atgcctgctc	agtgttgtgg	gccatttgtc	240
cagaagggga	cggcagcagc	tgtagctggc	tcctccgggg	tccaggcagc	aggccacagg	300
gcagaactga	ccatctgggc	accgcgttcc	agccaccagc	cctgctgtta	aggccacca	360
gctcaccagg	gtccacatgg	tctgcctgcg	tccgactccg	cggtccttgg	gccctgatgg	420
ttctacctgc	tgtgagctgc	ccagtgggaa	gtatggctgc	tgccaatgcc	caacgccacc	480

tgctgctccg atcacctgca ctgctgcccc aagacactgt gtgtgacctg atccagagta 540
agtgcctctc caaggagaac g 561

<210> 91

<211> 541

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(541)

<223> n = A,T,C or G

<400> 91

gaatcacctt tctggtttag ctagtacttt gtacagaaca atgaggtttc ccacagcgga 60
gtctccctgg gctctgtttg gctctcggtg aggcaggcct acaccttttc ctctcctcta 120
tggagagggg aatatgcatt aagggtgaaaa gtcaccttcc aaaagtgaga aagggttcg 180
attgctgctt caggactgtg gaattatttg gaatgtttta caaatgggtg ctacaaaaca 240
acaaaaaagg taattacaaa atgtgtacat cacaacatgc tttttaaaga cattatgcat 300
tgtgtcaca ttcccttaaa tgttgtttcc aaagggtgctc agcctctagc ccagctggat 360
tctccgggaa gaggcagaga cagtttggtg aaaaagacac aggggaaggag ggggtggtga 420
aaggagaaag cagccttcca gttaaagatc agccctcagt taaaggtcag cttcccgcac 480
gctggcctca ngcggagtct gggtcagagg gaggagcagc agcagggtgg gactggggcg 540
t 561

<210> 92

<211> 551

<212> DNA

<213> Homo sapien

<400> 92

aaccggagcg cgagcagtag ctgggtgggc accatggctg ggatcaccac catcgaggcg 60
gtgaagcgca agatccaggt tctgcagcag caggcagatg atgcagagga gcgagctgag 120
cgctccagc gagaagttga gggagaaagg cgggcccggg aacaggctga ggctgagggtg 180
gcctccttga accgtaggat ccagctggtt gaagaagagc tggaccgtgc tcaggagcgc 240
ctggccactg ccctgcaaaa gctggaagaa gctgaaaaag ctgctgatga gagtgaagaa 300
ggtatgaagg ttattgaaaa ccgggcctta aaagatgaag aaaagatgga actccaggaa 360
atccaactca aagaagctaa gcacattgca gaagaggcag ataggaaagta tgaagagggtg 420
gctcgtaagt tggatgatcat tgaaggagac ttggaacgca cagaggaaag agctgagctg 480
gcagagtccc gttgccgaga gatggatgag cagattagac tgatggacca gaacctgaag 540
tgtctgagtg c 551

<210> 93

<211> 531

<212> DNA

<213> Homo sapien

<400> 93

gagaacttgg cttttattgt gggcccagga gggcaciaaag gtcaggaggc ccaagggagg 60
gatctggttt tctggatagc caggtcatag catgggtatc agtaggaatc cgctgtagct 120
gcacaggcct cacttgcctg agttccgggg agaacacctg cactgcatgg cgctgatgac 180
ctcgtgttac acgacagagc cattggtgca gtgcaagggc acgcgcatgg gctccgtcct 240
cgagggcagg cagcaggagc attgctcctg cacatcctcg atgtcaatgg agtacacagc 300
tttgctggca cactttccct ggcagtaatg aatgtccact tcctcttggg acttacaatc 360
tcccactttg atgtactgca cttgggtgtg gatgtctttg caatcaggct cctcacatgt 420

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gtcacagcag gtgcctggaa ttttcacgat tttgcctcct tcagccagac acttgtgttc 480
atcaaatggt gggcagcccg tgaccctctt ctcccagatg tactctcctc t 531
```

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<210> 94
<211> 531
<212> DNA
<213> Homo sapien
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```
<220>
<221> misc_feature
<222> (1)...(531)
<223> n = A,T,C or G
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<400> 94
gcctggacct tgccggatca gtgccacaca gtgacttgct tggcaaatgg ccagaccttg 60
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tctcctgttc ggggtggagga gacgtgtggc tgccgctgga cctgcccttg tgtgtgcacg 180
ggcagttcca ctccggcacat cgtcaccttc gatgggcaga atttcaagct tactggtagc 240
tgctcctatg tcatctttca aaacaaggag caggacctgg aagtgtcctt ccacaatggg 300
gcctgcagcc ccggggcaaa acaagcctgc atgaagtcca ttgagattaa gcatgctggc 360
gtctctgctg agctgcacag taacatggag atggcagtg atgggagact ggtccttgcc 420
ccgtacgttg gtgaaaacat ggaagtcagc atctacggcg ctatcatgta tgaagtcagg 480
tttaccatc ttggccacat cctcacatac accgcncaa aacaacgagt t 531
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```
<210> 95
<211> 605
<212> DNA
<213> Homo sapien
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<400> 95
agatcaacct ctgctgggtca ggaggaatgc cttccttgct ttggatcttt gctttgacgt 60
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rsgraraytt agacaycccm cctcwagagc gsagkaccar gtgcagaggt ggactctttc 180
tggatgttgt agtcagacag ggtgcgtcca tcttcagct gtttcccagc aaagatcaac 240
ctctgctgat caggagggat gccttcctta tcttgatctt ttgccttgac attctcgatg 300
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tgcacccac ctctgagacg gacaccagg tgcagggttg actctttctg gatgtttag 420
tcagacaggg tgcgyccatc ttccagctgc ttccsagca aagatcaacc tctgctggc 480
aggaggratg ccttccttgt cytggatctt tgcyttgacr ttctcratgg tgtcactcgg 540
ctccacttcg agagtgatgg tcttaccagt cagggtcttc acgaagatct gcatcccacc 600
tctaa 605
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```
<210> 96
<211> 531
<212> DNA
<213> Homo sapien
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<400> 96
aagtcacaaa cagacaaaga ttattaccag ctgcaagcta tattagaagc tgaacgaaga 60
gacagaggtc atgattctga gatgattgga gaccttcaag ctccaattac atctttacaa 120
gaggaggtga agcatctcaa acataatctc gaaaaagtgg aaggagaaag aaaagaggct 180
caagacatgc ttaatcactc agaaaaggaa aagaataatt tagagataga tttaaactac 240
aaacttaaat cattacaaca acggttagaa caagaggtaa atgaacacaa agtaaccaaa 300
gctcgtttta ctgacaaaca tcaatctatt gaagaggcaa agtctgtggc aatgtgtgag 360
atggaaaaaa agctgaaaga agaaagagaa gctcgagaga aggctgaaaa tcgggttggt 420
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cagattgaga aacagtgttc catgctagac gttgatctga agcaatctca gcagaaacta 480
 gaacatttga ctggaaataa agaaaggatg gaggatgaag ttaagaatct a 531

<210> 97

<211> 1017

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(1017)

<223> n = A,T,C or G

<400> 97

cgctccacc atgtccatca gggtgaccca gaagtccctac aaggtgtcca cctctggccc 60
 ccgggccttc agcagccgct cctacacgag tgggcccggg tcccgcatca gctcctcgag 120
 cttctcccgga gtgggcagca gcaactttcg cgggtggcctg ggcgccggct atgggtggggc 180
 cagcggcatg ggaggcatca ccgcagttac ggtcaaccag agcctgctga gcccccttgt 240
 cctggagggtg gaccccaaca tccaggccgt gcgcacccag gagaaggagc agatcaagac 300
 cctcaacaac aagtttgcct ccttcataga caagggtacgg ttcttgagc agcagaacaa 360
 gatgctggag accaagtgga gctcctgca gcagcagaag acggctcgaa gcaacatgga 420
 caacatgttc gagagctaca tcaacarcct taggcggcag ctggagactc tgggccagga 480
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 gaaggatgtg gatgaagctt acatgaacaa ggtagagctg gagtctcgcc tgggaagggt 660
 gaccgacgag atcaacttcc tcaggcagct catggacaac gagatccggg agctgcagtc 720
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 ggatgacctg cggcgacaaa agactgagat ctctgagatg aaccgggaac atcagcccgg 960
 ctncaggctg agattgaggg cctcaaaggc caganggctt ncctggangn ccgccat 1017

<210> 98

<211> 561

<212> DNA

<213> Homo sapien

<400> 98

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 tgggtctgga aacccaaacc ctcaaggatg gcctggcgca tgggggaacc agcctgctgg 120
 ggcagggggc taccaggggg cttcctatcc tggggcctac cccgggcagg cacccccagg 180
 ggcttatcct ggacaggcac ctccaggcgc ctaccctgga gcacctggag cttatcccgg 240
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 aacaattctg ggcacgggtga agcccaatgc aaacagaatt gctttagatt tccaaagagg 480
 gaatgatgtt gccttccact ttaacccacg cttcaatgag aacaacagga gagtcatggg 540
 ttgcaatata aagctggata a 561

<210> 99

<211> 636

<212> DNA

<213> Homo sapien

<400> 99

gggaatgcaa	caacttttatt	gaaaggaaag	tgcaatgaaa	tttgttgaaa	ccttaaaagg	60
ggaaacttag	acaccccccc	tcragcgmag	kaccargtgc	aragggtggac	tctttctgga	120
tggtttagtc	agacagggtr	cgwccatctt	ccagctgttt	yccrgcaaag	atcaacctct	180
gctgatcagg	aggratgcct	tccttatctt	ggatccttgc	cttgacattc	tcgatgggtg	240
cactgggctc	cacctcgagg	gtgatgggtc	taccagtcag	ggtcttcacg	aagatytgca	300
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ggratgcctt	ccttgctcyt	gatctttgcy	ttgacrttct	caatgggtgc	actcggtctc	480
acttcgagag	tgatgggtct	accagtcagg	gtcttcacga	agatctgcat	cccacctcta	540
agacggagca	ccagggtgcag	ggtggactct	ttctggatgg	ttgtagtcag	acagggtgcg	600
tccatcttcc	agctgtttcc	cagcaaagat	caacct			636

<210> 100

<211> 697

<212> DNA

<213> Homo sapien

<400> 100

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ccagaaagag	tccaccctgc	acctgggtgc	ccgtcttaga	ggtgggatgc	agatcttcgt	120
gaagaccctg	actggtaaga	ccatcactct	cgaagtggag	ccgagtgaca	ccattgagaa	180
ygtaargca	aagatccarg	acaaggaagg	catyctctct	gaccagcaga	ggttgatctt	240
tgctsggaaa	gcagctggaa	gatgggagca	ccctgtctga	ctacaacatc	cagaaagagt	300
cyaccctgca	cctgggtgct	cgctctcagag	gtgggatgca	ratcttcgtg	aagaccctga	360
ctggtaagac	catcaccctc	gagggtggagc	ccagtgacac	catcgagaat	gtcaaggcaa	420
agatccaaga	taaggaaggc	atccctcctg	atcagcagag	gttgatcttt	gctgggaaac	480
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atcamcmwtg	akktcgakys	castkwcaet	wtrakaamg	tyrwwgcawa	gatccmagac	660
aaggaaggca	ttcctcctga	ccagcagagg	ttgatct			697

<210> 101

<211> 451

<212> DNA

<213> Homo sapien

<400> 101

atggagtctc	actctgtcga	ccaggctgga	gcgctgtggt	gcgatatcgg	ctcactgcag	60
tctccacttc	ctgggttcaa	gcgatccctc	tgctctagcc	tcccagagtag	ctgggactac	120
aggcaggcgt	caccataatt	tttgtatttt	tagtagagac	atggtttcgc	catggtggct	180
gggctggtct	cgaactcctg	acctcaagtg	atctgtcctg	gcctcccaaa	gtggtgggat	240
tacaggcgaa	agccaacgct	cccggccagg	gaacaacttt	agaatgaagg	aaatatgcaa	300
aagaacatca	catcaaggat	caattaatta	ccatctatta	attactatat	gtgggtaatt	360
atgactattt	ccaagcatt	ctacgttgac	tgcttgagaa	gatgtttgtc	ctgcatgggtg	420
gagagtggag	aagggccagg	attcttaggt	t			451

<210> 102

<211> 571

<212> DNA

<213> Homo sapien

<400> 102

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cagctcgttg	aggaggagtt	ggacagggct	caggaacgac	tggccacggc	cctgcagaag	120
ctggaggagg	cagaaaaagc	tgacagatgag	agtgaagag	gaatgaaggt	gatagaaaac	180

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cgggccatga aggatgagga gaagatggag attcaggaga tgcagctcaa agaggccaag      240
cacattgctg aagaggctga ccgcaaatac gaggaggtag ctcgtaagct ggtcatcctg      300
gaggggtgagc tggagagggc agaggagcgt gcggagggtg ctgaactaaa atgtggtgac      360
ctggaagaag aactcaagaa tgttactaac aatctgaaat ctctggaggc tgcattctgaa      420
aagtattctg aaaaggagga caaatatgaa gaagaaatta aacttctgtc tgacaaaactg      480
aaagaggctg agaccctgct tgaatttgca gagagaacgg ttgcaaaact ggaaaagaca      540
attgatgacc tggaagagaa acttggccag c                                     571

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<210> 103
 <211> 451
 <212> DNA
 <213> Homo sapien

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<400> 103
gtgcacaggt cccatttatt gtagaaaata ataataatta cagtgatgaa tagctcttct      60
taaattacaa aacagaaacc acaaagaagg aagaggaaaa accccaggac ttccaagggt      120
gaagctgtcc cctcctccct gccaccctcc caggctcatt agtgtccttg gaaggggcag      180
aggactcaga ggggatcagt ctccaggggc cctgggctga agcgggtgag gcagagagtc      240
ctgaggccac agagctgggc aacctgagcc gcctctcttg cccctcccc caccactgcc      300
caaacctgtt tacagcacct tcgcccctcc cctctaaacc cgtccatcca ctctgcactt      360
cccaggcagg tgggtgggccc aggcctcagc catactcctg ggcgcggtt tcggtgagca      420
aggcacagtc ccagaggtga tatcaaggcc t                                     451

```

<210> 104
 <211> 441
 <212> DNA
 <213> Homo sapien

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<400> 104
gcaaggaact ggtctgctca cacttgctgg cttgcgcctc aggactggct ttatctcctg      60
actcacggtg caaagggtga ctctgcgaac gttaagtccg tccccagcgc ttggaatcct      120
acggccccc cagccggatc ccctcagcct tccaggctct caactcccgt ggacgctgaa      180
caatggcctc catggggcta caggtaatgg gcacgcgctg ggccgtcctg ggctggctgg      240
ccgtcatgct gtgctgcgag ctgcccctgt ggcgcgtgac ggccttcctc ggcagcaaca      300
ttgtcacctc gcagaccatc tgggaggggc tatggatgaa ctgctggtg cagagcaccg      360
gccagatgca gtgcaagggt tacgactcgc tgctggcact gccgcaggac ctgcaggcgg      420
cccgcgcctc cgtcatcctc a                                     441

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<210> 105
 <211> 509
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(509)
 <223> n = A,T,C or G

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<400> 105
tgcaaaaagg acacaggggt tcaaaaataa aaatttctct tccccctccc caaacctgta      60
ccccagctcc ccgaccacaa cccccctcct cccccgggga aagcaagaag gagcaggtgt      120
ggcatctgca cctgggaaga gagaggccgg ggagggtgcc agctcgggtg tggctctctt      180
ccaaatataa atacntgtgt cagaactgga aaatcctcca gcaccacca cccaagcact      240
ctccgttttc tgccggtgtt tggagagggg cggggggcag gggcgccagg caccggctgg      300
ctgcggtcta ctgcatccgc tgggtgtgca ccccgcgagc ctctgctgct tcattgtaga      360

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agagatgaca	ctcgggggtcc	ccccggatgg	tggggggctcc	ctggatcagc	ttccccgtgt	420
tgggggttcac	acaccagcac	tccccacgct	gccccgttcag	agacatcttg	cactgtttga	480
ggttgtagac	gccatgcttg	tcacagttg				509

<210> 106

<211> 571

<212> DNA

<213> Homo sapien

<400> 106

gggttgagg	gactggttct	ttatttcaaa	aagacacttg	tcaatattca	gtatcaaaac	60
agttgcacta	ttgatttctc	tttctcccaa	tcggccccaa	agagaccaca	taaaaggaga	120
gtacatttta	agccaataag	ctgcaggatg	tacacctaac	agacctccta	gaaaccttac	180
cagaaaatgg	ggactgggta	gggaaggaaa	cttaaaagat	caacaaactg	ccagcccacg	240
gactgcagag	gctgtcacag	ccagatgggg	tggccagggt	gccacaaacc	caaagcaaag	300
tttcaaaaata	atataaaaatt	taaaaagttt	tgtacataag	ctattcaaga	tttctccagc	360
actgactgat	acaaagcaca	attgagatgg	cacttctaga	gacagcagct	tcaaaccacg	420
aaaagggtga	tgagatgagt	ttcacatggc	taaatcagtg	gcaaaaacac	agtcttcttt	480
ctttctttct	ttcaaggagg	caggaaagca	attaagtggg	cacctcaaca	taagggggac	540
atgatccatt	ctgtaagcag	ttgtgaaggg	g			571

<210> 107

<211> 555

<212> DNA

<213> Homo sapien

<400> 107

caggaaccgg	agcgcgagca	gtagctgggt	gggcaccatg	gctgggatca	ccaccatcga	60
ggcgggtgaag	cgcaagatcc	aggttctgca	gcagcaggca	gatgatgcag	aggagcgagc	120
tgagcgcctc	cagcgagaag	ttgagggaga	aaggcgggcc	cgggaacagg	ctgaggctga	180
ggtggcctcc	ttgaaccgta	ggatccagct	ggttgaagaa	gagctggacc	gtgctcagga	240
gcgcctggcc	actgccctgc	aaaagctgga	agaagctgaa	aaagctgctg	atgagagtga	300
gagaggtatg	aaggttattg	aaaaccgggc	cttaaaagat	gaagaaaaga	tggaaactcca	360
ggaaatccaa	ctcaaagaag	ctaagcacat	tgcagaagag	gcagatagga	agtatgaaga	420
ggtggctcgt	aagttggtga	tcattgaagg	agacttgga	cgcacagagg	aacgagctga	480
gctggcagag	tcccgttgcc	gagagatgga	tgagcagatt	agactgatgg	accagaacct	540
gaagtgtctg	agtg					555

<210> 108

<211> 541

<212> DNA

<213> Homo sapien

<400> 108

atctacgtca	tcaatcaggc	tgagacacc	atgttcaatc	gagctaagct	gctcaatatt	60
ggctttcaag	aggccttgaa	ggactatgat	tacaactgct	ttgtgttcag	tgatgtggac	120
ctcattccga	tgagcagacc	taatgcctac	aggtgttttt	cgcagccacg	gcacatttct	180
ggttgcaatg	acaagttcgg	gtttagcctg	ccatatgttc	agtattttgg	aggtgtctct	240
gctctcagta	aacaacagtt	tcttgccatc	aatggattcc	ctaataatta	ttgggggttg	300
ggaggagaag	atgacgacat	ttttaacaga	ttagttcata	aaggcatgtc	tatatcacgt	360
ccaaatgctg	tagtagggag	gtgtcgaatg	atccggcatt	caagagacaa	gaaaaatgag	420
cccaatcctc	agagggtttga	ccggatcgca	catacaaagg	aaacgatgcg	cttcgatggt	480
ttgaactcac	ttacctacaa	ggtgttgga	gtcagagata	cccgttatat	acccaaatca	540
c						541

<210> 109
 <211> 411
 <212> DNA
 <213> Homo sapien

<400> 109
 ctagacctct aattaaaagg cacaatcatg ctggagaatg aacagtctga ccccgagggc 60
 cacagcgaat tttaggggaag gaggcaaaga ggtgagaagg gaaaggaaaag aaggaaggaa 120
 ggagaacaat aagaactgga gacgttggtt gggtcaggga gtgtggtgga ggctcggaga 180
 gatggtaaac aaacctgact gctatgagtt ttcaaccca tagtctaggg ccatgagggc 240
 gtcagttctt ggtggctgag ggtccttcca cccagcccac ctgggggaggt ggagtgggga 300
 gttctgccag gtaagcagat gttgtctccc aagttcctga cccagatgtc tggcaggata 360
 acgctgacct gttccctcaa caagggacct gaaagtaatt ttgctcttta c 411

<210> 110
 <211> 451
 <212> DNA
 <213> Homo sapien

<400> 110
 ccgaattcaa gcgtcaacga tccytccctt accatcaaatt caattggcca ccaatggtac 60
 tgaacctacg agtacaccga ctacgggagg actaatcttc aactcctaca tacttcccc 120
 attattccta gaaccaggcg acctgcgact ccttgacgtt gacaatcgag tagtactccc 180
 gattgaagcg cccattcgta taataattac atcacaagac gtcttgcaact catgagctgt 240
 cccacatta ggcttaaaaa cagatgcaat tcccggacgt ctaagccaaa ccactttcac 300
 cgctacacga cggggggtat actacggtca atgctctgaa atctgtggag caaaccacag 360
 tttcatgccc atcgctctag aattaattcc cctaaaaatc ttgaaatag ggcccgtatt 420
 taccctatag caccctctct accctctcta g 451

<210> 111
 <211> 541
 <212> DNA
 <213> Homo sapien

<400> 111
 gctcttcaca cttttattgt taattctctt cacatggcag atacagagct gtcgtcttga 60
 agaccaccac tgaccaggaa atgccacttt tacaaaaatc tccccctttt tcatgattgg 120
 aacagttttc ctgaccgtct gggagcgttg aagggtgacc agcacatttg cacatgcaaa 180
 aaaggagtga ccccaaggcc tcaaccacac ttcccagagc tcaccatggg ctgcagggtga 240
 cttgccaggt ttgggggttcg tgagctttcc ttgctgctgc ggtggggagg ccctcaagaa 300
 ctgagaggcc ggggtatgct tcatgagttg taacatttac gggacaaaag cgcatcatta 360
 ggataaggaa cagccacagc acttcatgct tgtgaggggt agctgtagga gcgggtgaaa 420
 ggattccagt ttatgaaaat ttaaagcaaa caacgggttt tagctgggtg ggaaacagga 480
 aaactgtgat gtcggccaat gaccaccatt tttctgcca tgtgaagggt cccatgaaac 540
 c 541

<210> 112
 <211> 521
 <212> DNA
 <213> Homo sapien

<400> 112
 caagcgcttg gcgtttggac ccagttcagt gaggttcttg ggttttgtgc ctttggggat 60
 tttggtttga cccaggggtc agccttagga aggtcttcag gaggaggccg agttccccct 120
 cagtaccacc cctctctccc cactttccct ctcccgcaaa catctctggg aatcaacagc 180

atattgacac	gttggagccg	agcctgaaca	tgcccctcgg	ccccagcaca	tggaaaaccc	240
ccttccttgc	ctaagggtgc	tgagtttctg	gctcttgagg	catttccaga	cttgaaattc	300
tcatcagtc	attgctcttg	agtctttgca	gagaacctca	gatcaggtgc	acctgggaga	360
aagactttgt	ccccacttac	agatctatct	cctcccttgg	gaagggcagg	gaatggggac	420
ggtgtatgga	ggggaaggga	tctcctgcgc	ccttcattgc	cacacttggt	gggaccatga	480
acatctttag	tgtctgagct	tctcaaatta	ctgcaatagg	a		521

<210> 113
 <211> 568
 <212> DNA
 <213> Homo sapien

<400> 113						
agcgtcaaat	cagaatggaa	aagactcaaa	accatcatca	acaccaagat	caaaaggaca	60
agratccttc	aagaaacagg	aaaaaactcc	taaaacacca	aaaggaccta	gttctgtaga	120
agacattaaa	gcaaaaatgc	aagcaagtat	agaaaaaggt	ggttctcttc	ccaaagtgga	180
agccaaattc	atcaattatg	tgaagaattg	cttccggatg	actgaccaag	aggctattca	240
agatctctgg	cagtggagga	agtctcttta	agaaaatagt	ttaaacaatt	tgttaaaaaa	300
ttttccgtct	tatttcattt	ctgtaacagt	tgatatctgg	ctgtcctttt	tataatgcag	360
agtgagaact	ttccctaccg	tgtttgataa	atgttgtcca	ggttctattg	ccaagaatgt	420
gttgtccaaa	atgcctgttt	agtttttaaa	gatggaactc	caccctttgc	ttggttttaa	480
gtatgtatgg	aatgttatga	taggacatag	tagtagcggg	ggtcagacat	ggaaatggtg	540
ggsmgacaaa	aatatacatg	tgaataaa				568

<210> 114
 <211> 483
 <212> DNA
 <213> Homo sapien

<400> 114						
tccgaattcc	aagcgaatta	tggaacaaacg	attcctttta	gaggattact	tttttcaatt	60
tccgttttag	taatctaggc	tttgccgtgta	aagaatacaa	cgatggattt	taaatactgt	120
ttgtggaatg	tgtttaaagg	attgattcta	gaacctttgt	atatttgata	gtattttctaa	180
ctttcatttc	tttactgttt	gcagttaatg	ttcatgttct	gctatgcaat	cgtttatatg	240
cacgtttctt	taattttttt	agattttcct	ggatgtatag	tttaaacaac	aaaaagtcta	300
tttaaaactg	tagcagtagt	ttacagttct	agcaaagagg	aaagttgtgg	ggttaaactt	360
tgtattttct	ttcttataga	ggcttctaaa	aaggatattt	tatatgttct	ttttaacaaa	420
tattgtgtac	aacctttaaa	acatcaatgt	ttggatcaaa	acaagaccca	gcttattttc	480
tgc						483

<210> 115
 <211> 521
 <212> DNA
 <213> Homo sapien

<400> 115						
tgtggtggcg	cgggctgagg	tgagggccca	ggactctgac	cctgcccctg	ccttcagcaa	60
ggcccccggc	agcgccggcc	actacgaact	gccgtgggtt	gaaaaatata	ggccagtaaa	120
gctgaatgaa	attgtcggga	atgaagacac	cgtgagcagg	ctagaggtct	ttgcaaggga	180
aggaaatgtg	cccaacatca	tcattgcggg	ccctccagga	accggcaaga	ccacaagcat	240
tctgtgcttg	gcccggggcc	tgctggggcc	agcactcaaa	gatgccatgt	tggaaactcaa	300
tgcttcaaat	gacaggggca	ttgacgttgt	gaggaataaa	attaaaatgt	ttgctcaaca	360
aaaagtcaact	cttcccaaag	gccgacataa	gatcatcatt	ctggatgaag	cagacagcat	420
gaccgacgga	gcccagcaag	ccttgaggag	aacctgggaa	atctactcta	aaaccactcg	480
ttcgcccttg	cttgtaatgc	ttcggataag	atcatcgagc	c		521

<210> 116
 <211> 501
 <212> DNA
 <213> Homo sapien

<400> 116
 ctttgcaaag cttttatttc atgtctgcgg catggaatcc acctgcacat ggcatcttag 60
 ctgtgaagga gaaagcagtg cacgagaagg aatgagtggg cggaaccaac ggcctccaca 120
 agctgccttc cagcagcctg ccaaggccat ggcagagaga gactgcaaac aaacacaagc 180
 aaacagagtc tcttcacagc tggagtctga aagctcatag tggcatgtgt gaatctgaca 240
 aaattaaaag tgtgcatagt ccattacatg cataaaacac taataataat cctgtttaca 300
 cgtgactgca gcaggcaggc ccagctccac cactgccctc ctgccacatc acatcaagtg 360
 ccatggttta gaggggtttt catatgtaat tcttttattc tgtaaaaggt aacaaaatat 420
 acagaacaaa actttccctt tttaaaacta atgttacaaa tctgtattat cacttgata 480
 taaatagtat ataagctgat c 501

<210> 117
 <211> 451
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(451)
 <223> n = A,T,C or G

<400> 117
 caagggatat atgttgaggg tacrgrgtga cactgaacag atcacaaagc acgagaaaca 60
 ttagttctct ccctccccag cgtctccttc gtctccctgg ttttccgatg tccacagagt 120
 gagattgtcc ctaagtaact gcatgatcag agtgctgkct ttataagact cttcattcag 180
 cgtatccaat tcagcaattg cttcatcaaa tgccgttttt gccaggctac aggccttttc 240
 aggagagttt agaatctcat agtaaaagac tgagaaattt agtgccagac caagacgaat 300
 tgggtgtgta ggctgcattn ctttcttact aatttcaaat gcttcctggg aagcctgctg 360
 ggagttcgac acaagtgggt tgtttggtgc tccagatgcc acttcagaaa gatacctaaa 420
 ataatctcct ttcattttca aagtagaaca c 451

<210> 118
 <211> 501
 <212> DNA
 <213> Homo sapien

<400> 118
 tccggagccg gggtagtcgc cgccgccgcc gccggtgcag ccaactgcagg caccgctgcc 60
 gccgcctgag tagtgggctt aggaaggaag aggtcatctc gctcggagct tcgctcggaa 120
 gggctctttgt tccctgcagc cctcccacgg gaatgacaat ggataaaaagt gagctgggtac 180
 agaaagccaa actcgctgag caggctgagc gatatgatga tatggctgca gccatgaagg 240
 cagtcacaga acaggggcat gaactctcca acgaagagag aaatctgctc tctgttgctt 300
 acaagaatgt ggtaaggccg cccgccgctc ttcttgccgt gtcattctcca gcattgagca 360
 gaaaacagag aggaatgaga agaagcagca gatgggcaaa gagtaccgtg agaagataga 420
 ggcagaactg caggacatct gcaatgatgt tctggagctt gttggacaaa tatcttattc 480
 caatgctaca caaccagaa a 501

<210> 119
 <211> 391

<212> DNA

<213> Homo sapien

<400> 119

aaaaagcagc	argttcaaca	caaaatagaa	atctcaaatg	taggatagaa	caaaaccaag	60
tgtgtgaggg	gggaagcaac	agcaaaagga	agaaatgaga	tgttgcaaaa	aagatggagg	120
agggttcccc	tctcctctgg	ggactgactc	aaacactgat	gtggcagtat	acaccattcc	180
agagtcaggg	gtgttcattc	ttttttggga	gtaagaaaag	gtggggatta	agaagacgtt	240
tctggaggct	tagggaccaa	ggctgggtctc	tttccccct	cccaaccccc	ttgatccctt	300
tctctgatca	ggggaaagga	gctcgaatga	gggaggtaga	gttggaaagg	gaaaggattc	360
cacttgacag	aatgggacag	actccttccc	a			391

<210> 120

<211> 421

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(421)

<223> n = A,T,C or G

<400> 120

tggcaatagc	acagccatcc	aggagctctt	cargcgcctc	tcggagcagt	tactgccat	60
gttccgcccg	aaggccttcc	tcactggta	cacaggcgag	ggcatggacg	agatggagtt	120
caccgaggct	gagagcaaca	tgaacgacct	cgtctctgag	tatcaagcag	taccaggatg	180
ccaccgcaga	agaggaggag	gatttcgggtg	aggaggccga	agaggaggcc	taaggcagag	240
cccccatcac	ctcaggcttc	tcagttccct	tagccgtctt	actcaactgc	ccctttcctc	300
tcctcagaa	tttgtgtttg	ctgcctctat	cttggttttt	gttttttctt	ctgggggggt	360
ctagaacagt	gcctggcaca	tagtaggcgc	tcaataaata	cttggttgnt	gaatgtctcc	420
t						421

<210> 121

<211> 206

<212> DNA

<213> Homo sapien

<400> 121

agctggcgct	agggtcgggt	tgtgaaatac	agcgttgtca	gcccttgccg	tcagtgtaga	60
aaccacgccc	tgtaaggteg	gtcttcgtcc	atctgctttt	ttctgaaata	cactaagagc	120
agccacaaaa	ctgtaacctc	aaggaaacca	taaagcttgg	agtgccttaa	tttttaacca	180
gtttccaata	aaacggttta	ctacct				206

<210> 122

<211> 131

<212> DNA

<213> Homo sapien

<400> 122

ggagatgaag	atgaggaagc	tgagtcagct	acgggcargc	gggcagctga	agatgatgag	60
gatgacgatg	tcgataccaa	gaagcagaag	accgacgagg	atgactagac	agcaaaaaag	120
gaaaagttaa	a					131

<210> 123

<211> 231

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(231)

<223> n = A,T,C or G

<400> 123

gatgaaaatt aaataacttaa attaatcaaa aggcactacg ataccaccta aaacctactg	60
cctcagtggc agtakgctaa kgaagatcaa gctacagsac atyatctaata atgaatgtta	120
gcaattacat akcargaagc atgtttgctt tccagaagac tatgggnacaa tggtcattwg	180
ggcccaagag gatatttggc cnggaaagga tcaagataga tnaangtaaa g	231

<210> 124

<211> 521

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(521)

<223> n = A,T,C or G

<400> 124

gagtagcaac gcaaagcgct tggatttgag tctgtgggsg acttcgggtc cggtctctgc	60
agcagccgtg atcgcttagt ggagtgccta gggtagttgg ccaggatgcc gaatatcaaa	120
atcttcagca ggcagctccc accaggactt atctcasaaa attgctgacc gcctgggcct	180
ggagctaggc aaggtggtga ctaagaaatt cagcaaccag gagacctgtg tggaaattgg	240
tgaaagtgtg ccgtggagag gatgtctaca ttgttcagag tggntgtggc gaaatcaatg	300
acaatttaaat ggagcttttg atcatgatta atgcctgcaa gattgcttca gccagccggg	360
ttactgcagt catcccatgc ttcccttatg ccccggcagg ataagaaaga tnagagccgg	420
gccgccaatc tcagccaagc ttggtgcaaa tatgctatct gtagcagtgc agatcatatt	480
atcaccatgg acctacatgc ttctcaaatt canggccttt t	521

<210> 125

<211> 341

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(341)

<223> n = A,T,C or G

<400> 125

atgcaaaaagg ggacacaggg gggtcaaaaa taaaaatttc tcttccccct ccccaaacct	60
gtacccccagc tccccgacca caacccccct cctcccccg ggaagcaag aaggagcagg	120
tgtggcatct gcagctggga agagagaggc cggggagggtg ccgagctcgg tgctgggtctc	180
tttccaaata taaatacgtg tgtcagaact ggaaaatcct ccagcaccaca ccaccaagc	240
actctccgtt ttctgcgggt gtttggagag gggcggnngg caggggcgcc aggcaccggc	300
tggctgcgggt ctactgcac cgcctgggtgt gcacccccgc a	341

<210> 126

<211> 521

<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(521)
<223> n = A,T,C or G

<400> 126

agggttgaga	aggatcatgca	ggtgcagatt	gtccaggskc	agccacaggg	tcaagcccaa	60
caggcccaga	gtggcactgg	acagaccatg	caggatgatgc	agcagatcat	cactaacaca	120
ggagagatcc	agcagatccc	ggtgcagctg	aatgccggcc	agctgcagta	tatccgctta	180
gccagcctg	tatcaggcac	tcaagttgtg	caggacaga	tccagacact	tgccaccaat	240
gctcaacaga	ttacacagac	agaggtccag	caaggacagc	agcagttcaa	gccagttcac	300
aagatggaca	gcagctctac	cagatccagc	aagtcaccat	gcctgcgggc	cangacctcg	360
ccagcccatg	ttcatccagt	caagccaacc	agcccttcna	cgggcaggcc	ccccaggtga	420
ccggcgactg	aagggcctga	gctggcaagg	ccaangacac	ccaacacaat	ttttgccata	480
cagccccag	gcaatgggca	cagcctttct	tcccagagga	c		521

<210> 127
<211> 351
<212> DNA
<213> Homo sapien

<400> 127

tgagatttat	tgcatttcat	gcagcttgaa	gtccatgcaa	aggrgactag	cacagttttt	60
aatgcattta	aaaaataaaa	gggaggtggg	cagcaaacac	acaaagtcct	agtttcctgg	120
gtccctggga	gaaaagagtg	tggcaatgaa	tccaccact	ctccacaggg	aataaatctg	180
tctcttaaat	gcaaagaatg	tttccatggc	ctctggatgc	aaatacacag	agctctgggg	240
tcagagcaag	ggatggggag	aggaccacga	gtgaaaaagc	agctacacac	attcacctaa	300
ttccatctga	gggcaagaac	aacgtggcaa	gtcttggggg	tagcagctgt	t	351

<210> 128
<211> 521
<212> DNA
<213> Homo sapien

<400> 128

tccagacatg	ctcctgtcct	aggcggggag	caggaaccag	acctgctatg	ggaagcagaa	60
agagttaagg	gaaggtttcc	tttcattcct	gttccttctc	ttttgctttt	gaacagtttt	120
taaatatact	aatagctaag	tcatttgcca	gccaggctcc	ggtgaacagt	agagaacaag	180
gagcttgcta	agaattaatt	ttgctgtttt	tcacccatt	caaacagagc	tgccctgttc	240
cctgatggag	ttccattcct	gccagggcac	ggctgagtaa	cacgaagcca	ttcaagaaaag	300
gcgggtgtga	aatcactgcc	accccatgga	cagaccctc	actcttcctt	cttagccgca	360
gcgctactta	ataaatatat	ttatactttg	aaattatgat	aaccgatttt	tcccatgcgg	420
catcctaagg	gcacttgcca	gctcttatcc	ggacagtcaa	gcactgttgt	tggaacaacg	480
ataaaggaaa	agaaaaagaa	gaaaacaacc	gcaacttctg	t		521

<210> 129
<211> 521
<212> DNA
<213> Homo sapien

<400> 129

tgagacggac	cactggcctg	gtccccctc	atktgctgtc	gtaggacctg	acatgaaacg	60
------------	------------	-----------	------------	------------	------------	----

cagatctagt	ggcagagagg	aagatgatga	ggaacttctg	agacgtcggc	agcttcaaga	120
agagcaatta	atgaagctta	actcaggcct	gggacagttg	atcttgaaag	aagagatgga	180
gaaagagagc	cgggaaaggt	catctctgtt	agccagtcgc	tacgattctc	ccatcaactc	240
agcttcacat	attccatcat	ctaaaactgc	atctctccct	ggctatggaa	gaaatgggct	300
tcaccggcct	gtttctaccg	acttcgctca	gtataacagc	tatggggatg	tcagcggggg	360
agtgcgagat	taccagacac	ttccagatgg	ccacatgcct	gcaatgagaa	tggaccgagg	420
agtgtctatg	cccaacatgt	tggaaacaaa	gatatttcca	tatgaaatgc	tcatggtgac	480
caacagaggg	ccgaaaccaa	atctcagaga	ggtggacaga	a		521

<210> 130

<211> 270

<212> DNA

<213> Homo sapien

<400> 130

tcactttatt	tttcttgtat	aaaaacccta	tgtttagtagc	acagctggag	cctgagtccg	60
ctgcacggag	actctgggtg	gggtcttgac	gaggtgggtca	gtgaactcct	gatagggaga	120
cttgggtgaat	acagtctcct	tccagaggtc	gggggtcagg	tagctgtagg	tcttagaaat	180
ggcatcaaag	gtggccttgg	cgaagttgcc	caggggtggca	gtgcagcccc	gggctgaggt	240
gtagcagtca	tcgataccag	ccatcatgag				270

<210> 131

<211> 341

<212> DNA

<213> Homo sapien

<400> 131

ctggaatatata	gacccgtgat	cgacaaaact	ttgaacgagg	ctgactgtgc	caccgtcccc	60
ccagccattc	gctcctactg	atgagacaag	atgtgggtgat	gacagaaatca	gcttttgttaa	120
ttatgtataa	tagctcatgc	atgtgtccat	gtcataactg	tcttcatacg	cttctgcact	180
ctggggaaga	aggagtacat	tgaagggaga	ttggcaccta	gtggctggga	gcttgccagg	240
aacccagtgg	ccagggagcg	tggcacttac	ctttgtccct	tgcttcattc	ttgtgagatg	300
ataaaaactgg	gcacagctct	taaataaaat	ataaatgaac	a		341

<210> 132

<211> 844

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(844)

<223> n = A,T,C or G

<400> 132

tgaatgggga	ggagctgacc	caggaaatgg	agcttgngga	gaccaggcct	gcaggggatg	60
gaaccttcca	gaagtgggca	tctgtggtgg	tgccctcttg	gaaggagcag	aagtacacat	120
gccatgtgga	acatgagggg	ctgcctgagc	ccctcaccct	gagatggggc	aaggaggagc	180
ctccttcac	caccaagact	aacacagtaa	tcattgctgt	tccggttgte	cttggagctg	240
tggatcatcct	tggagctgtg	atggcttttg	tgatgaagag	gaggagaaac	acaggtggaa	300
aaggagggga	ctatgctctg	gtccaggct	cccagagctc	tgatatgtct	ctcccagatt	360
gtaaagtgtg	aagacagctg	cctggtgtgg	acttggtgac	agacaatgtc	ttcacacatc	420
tcctgtgaca	tccagagacc	tcagttctct	ttagtcaagt	gtctgatgtt	ccctgtgagt	480
ctgcgggctc	aaagtgaaga	actgtggagc	ccagtccacc	cctgcacacc	aggaccctat	540
ccctgcactg	ccctgtgttc	ccttccacag	ccaaccttgc	tgtccagcc	aaacattggt	600

ggacatctgc	agcctgtcag	ctccatgcta	ccctgacctt	caactcctca	cttccacact	660
gagaataata	atttgaatgt	gggtggctgg	agagatggct	cagcgctgac	tgctcttcca	720
aaggctcctga	gttcaaatacc	cagcaaccac	atgggtggctc	acaaccatct	gtaatgggat	780
ctaataccct	cttctgcagt	gtctgaagac	asctacagtg	tacttacata	taataataaa	840
taag						844

<210> 133

<211> 601

<212> DNA

<213> Homo sapien

<400> 133

ggccgggagc	gcgcgcccc	gccacacgca	cgccggggcgt	gccagtttat	aaagggagag	60
agcaagcagc	gagtccttgaa	gctctgtttg	gtgcttttga	tccatttcca	tcggtcctta	120
cagccgctcg	tcagactcca	gcagccaaga	tggtgaagca	gatcgagagc	aagactgctt	180
ttcaggaagc	cttggacgct	gcaggtgata	aactttagt	agttgacttc	tcagccacgt	240
ggtgtgggccc	ttgcaaaatg	atcaagcctt	tctttcattc	cctctctgaa	aagtattcca	300
acgtgatatt	ccttgaagta	gatgtggatg	actgtcagga	tgttgcttca	gagtgtgaag	360
tcaaatgcat	gccaacattc	cagtttttta	agaagggaca	aaaggtgggt	gaattttctg	420
gagccaataa	ggaaaagctt	gaagccacca	ttaatgaatt	agtctaata	tgttttctga	480
aaatataacc	agccattggc	tattttaaacc	ttgtaatttt	tttaattttac	aaaaatataa	540
aatatgaaga	cataaaccm	gttgccatct	gcgtgacaat	aaaacattaa	tgctaacact	600
t						601

<210> 134

<211> 421

<212> DNA

<213> Homo sapien

<400> 134

tcacataaga	aattttaagca	agttacrcra	tcttaaaaaa	cacaacgaat	gcatttttaat	60
agagaaacc	ttccctccct	ccacctccct	ccccaccct	cctcatgaat	taagaatcta	120
agagaagaag	taaccataaa	accaagtttt	gtggaatcca	tcattccagag	tgcttacatg	180
gtgattaggt	taatattgcc	ttcttacaaa	atttctatatt	taaaaaaaat	tataaccttg	240
attgcttatt	acaaaaaaat	tcagtacaaa	agttcaatat	attgaaaaat	gcttttcccc	300
tccttcacag	caccgtttta	tatatagcag	agaataatga	agagattgct	agtctagatg	360
gggcaatctt	caaattacac	caagacgcac	agtggtttat	ttacctccc	cttctcataa	420
g						421

<210> 135

<211> 511

<212> DNA

<213> Homo sapien

<400> 135

ggaaaggatt	caagaattag	aggacttgct	tgctrragaa	aaagacaact	ctcgtcgcat	60
gctgacagac	aaagagagag	agatggcgga	aataagggat	caaatgcagc	aacagctgaa	120
tgactatgaa	cagcttcttg	atgtaaagtt	agccctggac	atggaaatca	gtgcttacag	180
gaaactctta	gaaggcggaag	aagagaggtt	gaagctgtct	ccaagccctt	cttcccgtgt	240
gacagtatcc	cgagcatcct	caagtcgtag	tgtaccgtac	aactagagga	aagcgggaaga	300
gggttgatgt	ggaagaatca	gaggcgaagt	agtagtggtt	gcattctctca	ttccgcctca	360
accactggaa	atgttttgcac	cgaagaaatt	gatgttgatg	ggaaatttat	cccgtttgaa	420
gaacactttct	gaacaggatc	aaccaatggg	aaggcttggg	agatgatcag	aaaaattgga	480
gacacatcag	tcagttataa	atatacctca	a			511

<210> 136
 <211> 341
 <212> DNA
 <213> Homo sapien

<400> 136
 catgggtttc accaggttgg ccaggctgct cttgaactsc tgacctcagg tgateccaccc 60
 gcctcggcct cccaaagtgc tgggattaca ggcgtgagcc accacgcccg gcccccaaag 120
 ctgtttcttt tgtcttttagc gtaaagctct cctgccatgc agtatctaca taactgacgt 180
 gactgccagc aagctcagtc actccgtggg ctttttctct ttcagttct tctctctctc 240
 ttcaagttct gcctcagtg aagctgcagg tccccagtta agtgatcagg tgagggttct 300
 ttgaacctgg ttctatcagt cgaattaatc cttcatgatg g 341

<210> 137
 <211> 551
 <212> DNA
 <213> Homo sapien

<400> 137
 gatgtgttgg accctctgtg tcaaaaaaaaa cctcacaaag aatcccttgc tcattacaga 60
 agaagatgca tttaaaatat gggttatatt caacttttta tctgaggaca agtatccatt 120
 aattattgtg tcagaagaga ttgaatacct gcttaagaag cttacagaag ctatgggagg 180
 aggttggcag caagaacaat ttgaacatta taaaatcaac tttgatgaca gtaaaaatgg 240
 cctttctgca tgggaactta ttgagcttat tggaaatgga cagtttagca aaggcatgga 300
 ccggcagact gtgtctatgg caattaatga agtctttaat gaacttatat tagatgtgtt 360
 aaagcagggg tacatgatga aaaagggcc aagacggaaa aactggactg aaagatgggt 420
 tgtactaaaa cccaacataa tttcttacta tgtgagtga gatctgaagg ataagaaagg 480
 agacattctc ttggatgaaa attgctgtgt agaagtcctt gcctgacaaa agatggaaag 540
 aaatgccttt t 551

<210> 138
 <211> 531
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(531)
 <223> n = A,T,C or G

<400> 138
 gactggttct ttattttcaaa aagacacttg tcaatattca gtrtcaaaac agttgcacta 60
 ttgattttctc tttctcccaa toggcccca agagaccaca taaaaggaga gtacatttta 120
 agccaataag ctgcaggatg tacacctaac agacctccta gaaaccttac cagaaaatgg 180
 ggactgggta gggaaggaaa cttaaaagat caacaaactg ccagcccacg gactgcagag 240
 gctgtcacag ccagatgggg tggccagggt gccacaaacc caaagcaaag tttcaaaata 300
 atataaaatt taaaaagttt tgtacataag ctattcaaga tttctccagc actgactgat 360
 acaaagcaca attgagatgg cacttctaga gacagcagct tcaaaccacg aaaagggtga 420
 tgagatgaag tttcacatgg ctaaatcagt ggcaaaaaca cagtcttctt tctttctttc 480
 tttcaaggan gcaggaaaagc aattaagtgg tcaccttaac ataaggggga c 531

<210> 139
 <211> 521
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(521)
 <223> n = A,T,C or G

<400> 139
 tgggtgggca ccatggctgg gatcaccacc atcgaggcgg tgaagcgcaa gatccaggtt 60
 ctgcagcagc aggcagatga tgcagaggag cgagctgagc gcctccagcg agaagttgag 120
 ggagaaagc gggcccggga acaggctgag gctgaggtgg cctccttgaa ccgtaggatc 180
 cagctggttg aagaagagct ggaccgtgct caggagcgcc tggccactgc cctgcaaaaag 240
 ctggaagaag ctgaaaaagc tgctgatgag agtgagagag gtatgaaggt tattgaaaac 300
 cgggccttaa aagatgaaga aaagatggaa ctccaggaaa tccaactcaa agaagctaag 360
 cacattgcag aagaggcaga taggaagtat gaagaggtgg ctcgtaagtt ggtgatcatt 420
 gaaggagact tggaaccgca cagaaggaaac gagcttgagc ttggcaaaaag tcccgttgcc 480
 cagagatggg atgaaccaga ttagactgat ggaccanaac c 521

<210> 140
 <211> 571
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(571)
 <223> n = A,T,C or G

<400> 140
 aggggcnegc ggtgcgtggg ccactgggtg accgacttag cctggccaga ctctcagcac 60
 ctggaagcgc cccgagagtg acagcgtgag gctgggaggg aggacttggc ttgagcttgt 120
 taaactctgc tctgagcctc cttgtcgctt gcatttagat ggctcccgca aagaaggggtg 180
 gcgagaagaa aaagggccgt tctgccatca acgaagtggg aaccgcagaa tacaccatca 240
 acattcacaa gcgcattccat ggagtgggct tcaagaagcg tgcacctcgg gactcaaaag 300
 agattcggaa atttgccatg aaggagatgg gaactccaga tgtgcgcatt gacaccaggc 360
 tcaacaaagc tgtctgggcc aaaggaataa ggaatgtgcc ataccgaatc cgggtgtgcgg 420
 ctgtccagaa aacgtaatat ggatqaagat tcaccaaata agctatatac tttggttacc 480
 tatgtacctg ttaccacttt caaaaatcta cagacagtca atgtggatga gaactaatcg 540
 ctgatcgtca gatcaaataa agttataaaa t 571

<210> 141
 <211> 531
 <212> DNA
 <213> Homo sapien

<400> 141
 tcgggagcca cacttgcccc tcttcctctc caaagsgcca gaacctcctt ctctttggag 60
 aatggggagg cctcttgagg acacagaggg tttcaccttg gatgacctct agagaaattg 120
 cccaagaagc ccaccttctg gtcccaacct gcagaccca cagcagtcag ttggtcaggc 180
 cctgctgtag aaggctcactt ggctccattg cctgcttcca accaatgggc aggagagaag 240
 gcctttattt ctgcgccacc cattcctcct gtaccagcac ctccgttttc agtcagtgtt 300
 gtccagcaac ggtaccgttt acacagtcac ctccagacaca ccatttcacc tcccttgcca 360
 agctgttagc cttagagtga ttgcagtga cactgtttac acaccgtgaa tccattccca 420
 tcagtccatt ccagttggca ccagcctgaa ccatttggtta cctgggtgta actggagtc 480
 tgtttacaag gtggagtcgg ggcttgctga cttctcttca tttgagggca c 531

<210> 142
 <211> 491
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(491)
 <223> n = A,T,C or G

<400> 142
 acctagacag aaggtgggtg agggaggact ggtaggaggc tgaggcaatt ccttggtagt 60
 ttgtcctgaa accctactgg agaagtcagc atgaggcacc tactgagaga agtgcccaga 120
 aactgctgac tgcactctgtt aagagttaac agtaaagagg tagaagtgtg tttctgaatc 180
 agagtggaag cgtctcaagg gtcccacagt ggaggtccct gagctacctc ccttccgtga 240
 gtgggaagag tgaagcccat gaagaactga gatgaagcaa ggatgggggtt cctgggctcc 300
 aggcaagggc tgtgctctct gcagcaggga gccccacgag tcagaagaaa agaactaatc 360
 atttgttgca agaaaccttg cccggatact agcggaaaac tggaggcggn ggtgggggca 420
 caggaaagtg gaagtgattt gatggagagc agagaagcct atgcacagtg gccgagtcca 480
 cttgtaagt g 491

<210> 143
 <211> 515
 <212> DNA
 <213> Homo sapien

<400> 143
 ttcaagcaat tgtaacaagt atatgtagat tagagtgagc aaaatcatat acaattttca 60
 tttccagttg ctattttcca aattgttctg taatgtcgtt aaaattactt aaaaattaac 120
 aaagccaaaa attatattta tgacaagaaa gccatcccta cattaatctt acttttccac 180
 tcaccggccc atctccttcc tctttttcct aactatgcca ttaaaaactgt tctactgggc 240
 cgggcggtgtg gctcatgcct gtaatcccag cattttggga ggccaaggca ggcggatcat 300
 gaggtcaaga gattgagacc atcctggcca acatggtgaa accccgcctc gactaagaat 360
 acaaaaatta gctgggcatg gtggcgcatg cctgtagtct cagctactcg ggaggctgag 420
 gcagaagaat cgcttgaacc cgggaggcag aggatgcagt gagccccgat cgcgccactg 480
 cactctagcc tgggcgacag actgagactc tgctc 515

<210> 144
 <211> 340
 <212> DNA
 <213> Homo sapien

<400> 144
 tgtgccagtc tacaggccta tcagcagcga ctcccttcagc aacagatggg gtccccctgtt 60
 cagcccaacc ccatgagccc ccagcagcat atgctcccaa atcaggccca gtccccacac 120
 ctacaaggcc agcagatccc taattctctc tccaatcaag tgcgctctcc ccagcctgtc 180
 ccttctccac ggccacagtc ccagcccccc cactccagtc cttcccccaag gatgcagcct 240
 cagccttctc cacaccacgt ttccccacag acaagttccc cacatcctgg actggtagt 300
 gcccaggcca accccatgga acaagggcat tttgccagcc 340

<210> 145
 <211> 630
 <212> DNA
 <213> Homo sapien

<400> 145

tgtaaaaact	tgtttttaat	tttgtataaa	ataaagggtg	tccatgcccc	cgggggctgt	60
aggaaatcca	agcagaccag	ctgggggtgg	gggatgtagc	ctacctcggg	ggactgtctg	120
tcctcaaaac	gggctgagaa	ggcccgtcag	gggcccaggt	cccacagaga	ggcctgggat	180
actccccaa	cccagagggc	agactgggca	gtggggagcc	cccatcgtgc	cccagaggtg	240
gccacaggct	gaaggagggg	cctgaggcac	cgcagcctgc	aacccccagg	gctgcagtcc	300
actaactttt	tacagaataa	aaggaacatg	gggatgggga	aaaaagcacc	aggtcaggca	360
gggcccagag	gccccagatc	ccaggagggc	caggactcag	gatgccagca	ccaccctagc	420
agctcccaca	gtcctcggca	caggaggccg	ccacggattg	gcacaggccg	ctgctggcca	480
tcacgccaca	tttgagaaac	ttgtcccagc	agaggtcagc	tcggaggagc	tcctcgtggg	540
cacacactgt	acgaacacag	atctccttgt	taatgacgta	cacacggcgg	aggctgcggg	600
gacagggcac	gggaggtctc	agccccactt				630

<210> 146

<211> 521

<212> DNA

<213> Homo sapien

<400> 146

atggctgctg	gatttaggtg	gtaatagggg	ctgtgggcca	taaactctgaa	gccttgagaa	60
ccttgggctc	ggagagccat	gaagagggaa	ggaaaagagg	gcaagtccctg	aacctaacca	120
atgacctgat	ggattgctcg	accaagacac	agaagtgaag	tctgtgtctg	tgcaactccc	180
acagactgga	gtttttgggtg	ctgaatagag	ccagttgcta	aaaaattggg	ggtttgggtga	240
agaaatctga	ttgtttgtgtg	tattcaatgt	gtgattttta	aaataaacag	caacaacaat	300
aaaaaccctg	actggctggt	ttttccctgt	attcctttaca	actatTTTTT	gaccctctga	360
aaattattat	acttcaccta	aatggaagac	tgtctgtgtt	gtggaaattt	tgtaatTTTT	420
taatttattt	tattctctct	cctttttatt	ttgcctgcag	aatccgttga	gagacraata	480
aggcttaata	tttaattgat	ttgtttaata	tgtatataaa	t		521

<210> 147

<211> 562

<212> DNA

<213> Homo sapien

<400> 147

ggcatgcgag	cgcactcggc	ggacgcaagg	gcggcgggga	gcacacggag	cactgcaggc	60
gccgggttgg	gacagcgtct	tcgctgctgc	tggatagtcg	tgttttcggg	gatcgaggat	120
actcaccaga	aaccgaaaat	gccgaaacca	atcaatgtcc	gagttaccac	catggatgca	180
gagctggagt	ttgcaatcca	gccaaataca	actggaaaac	agctttttga	tcagggtgga	240
aagactatcg	gcctccggga	agtgtggtac	tttggcctcc	actatgtgga	taataaagga	300
tttcctacct	ggctgaagct	ggataaagaag	gtgtctgccc	aggaggtcag	gaaggagaat	360
cccctccagt	tcaagttccg	ggccaaaagt	ctaccctgaa	gatgtggctg	aggagctcat	420
ccaggacatc	acccagaaac	ttttcttcc	tcaagtgaag	gaaggaaatcc	ttagcgatga	480
gatctactgc	cccccttgat	actgccgtgc	tcttgggggtc	ctacgcttgt	gcatgccaag	540
tttggggact	accaccaaga	ag				562

<210> 148

<211> 820

<212> DNA

<213> Homo sapien

<400> 148

gaaggagtgc	ggatactcag	cattgatgca	ccccaatctc	aaagcggcat	tcttcggcag	60
gtctctggga	caatctctag	ggtcactacc	tggaaactcg	ttagggatca	actgaatgct	120
gaaaggaaaag	aacacctgca	gaaccggaca	gaaattcacc	ccggcgatca	gctgattgat	180

ctcgggtcgac	cagaagtcac	ggctaaagat	gacgaggacg	ttgtcaattc	cctgggcttt	240
tcgaagttag	tccagcagca	gtctgaggta	ttcggggccg	ttatgcacct	ggaccaccag	300
caccagctcc	cgggggggccc	aggtgccagc	cttatctaca	ttcctcaggg	tctgatcaaa	360
gttcagctgg	tacaccaggg	accggtaccg	cagcgtcagg	ttgtccgctc	gggctggggg	420
accgccggga	ccaggggaagc	cgccgacacg	ttggagaccc	tgccgatgcc	cacagccaca	480
gaggggtggg	ccccaccgcg	gccgcgggca	ccccgcgcgg	gttcggcgctc	cagcaacggg	540
ggggcgaggg	cctcggttctt	cctttgtcgc	ccattgctgc	tccagaggac	gaagccgcag	600
gcggccacca	cgagcgtcag	gattagcacc	ttccggttgt	agatgcggaa	cctcatggctc	660
tccagggccg	ggagcgcagc	tacagctcga	gcgtcggcgc	cgccgctagg	agccgcggct	720
cggttcgtc	tccgtcctct	ccattcagca	ccacgggtcc	cggaaaaagc	tcagccscgg	780
tcccaaccgc	accctagctt	cgttacctgc	gcctcgcttg			820

<210> 149

<211> 501

<212> DNA

<213> Homo sapien

<400> 149

cagattttta	tttgacgtcg	tactggggc	cgtttcttgc	tgcttatttg	tctgctagcc	60
tgctcttcca	gctgcatggc	caggcgcaag	gccttgatga	catctcgcag	ggctgagaaa	120
tgcttggtt	gctgggccag	agcagattcc	gctttgttca	caaaggtctc	caggtcatag	180
tctggctgct	cggtcatctc	agagagctca	agccagtctg	gtccttgctg	tatgatctcc	240
ttgagctctt	ccatagcctt	ctcctccagc	tcctgatct	gagtcatggc	ttcgttaaag	300
ctggacatct	gggaagacag	ttcctcctct	tccttgata	aattgcctgg	aatcagcgcc	360
ccgttagagc	aggcttccat	ctcttctgtt	tccatttgaa	tcaactgctc	tccactgggc	420
ccactgtggg	ggctcagctc	cttgaccctg	ctgcatatct	taagggtgtt	taaaggatat	480
tcacaggagc	ttatgcctgg	t				501

<210> 150

<211> 511

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(511)

<223> n = A,T,C or G

<400> 150

ctcctcttgg	tacatgaacc	caagttgaaa	gtggacttaa	caaagtatct	ggagaaccaa	60
gcattctgct	ttgactttgc	atttgatgaa	acagcttcga	atgaagttgt	ctacaggttc	120
acagcaaggc	cactggtaca	gacaatcttt	gaagggtgaa	aagcaacttg	ttttgcatat	180
ggccagacag	gaagtggcaa	gacacatact	atgggcggag	acctctctgg	gaaagcccag	240
aatgcatcca	aagggtatcta	tgccatggcc	ttccgggacg	tcttcttctg	aagaatcaac	300
cctgctaccg	gaagttgggc	ctggaagtct	atgtgacatt	cttcgagatc	tacaatggga	360
agctgtttga	cctgctcaac	aagaaggcca	agcttgccgc	tgctggaaga	cggcaagcaa	420
caggtgcaag	tggtgggggc	ttgcaggaac	atctggntaa	ctctgcttga	tgatggcant	480
caagatgatc	gacatgggca	gcgcctgcag	a			511

<210> 151

<211> 566

<212> DNA

<213> Homo sapien

<400> 151

tcccgaattc	aagcgacaaa	ttggawagt	aaatggaaga	tgcctatcat	gaacatcagg	60
caaattcttt	gcgccaagat	ctgatgagac	gacaggaaga	attaagacgc	atggaagaac	120
ttcacaatca	agaaatgcag	aaacgtaaa	aaatgcaatt	gaggcaagag	gaggaacgac	180
gtagaagaga	ggaagagatg	atgattcgtc	aacgtgagat	ggaagaacaa	atgaggcgcc	240
aaagagagga	aagttacagc	cgaatgggct	acatggatcc	acgggaaaga	gacatgcgaa	300
tgggtggcgg	aggagcaatg	aacatgggag	atccctatgg	ttcaggaggc	cagaaatttc	360
cacctctagg	aggtggtggt	ggcatagggt	atgaagctaa	tcctggcggt	ccaccagcaa	420
ccatgagtgg	ttccatgatg	ggaagtgaca	tgcgtactga	gcgctttggg	cagggaggtg	480
cggggcctgt	gggtggacag	ggtcctagag	gaatggggcc	tggaactcca	gcaggatatg	540
gtagagggag	agaagagtac	gaaggc				566

<210> 152

<211> 518

<212> DNA

<213> Homo sapien

<400> 152

ttcgtgaaga	cctgactgg	taagaccatc	actctcgaag	tggagcccga	gtgacaccat	60
tgagaatgtc	aaggcaaaaga	tccaagacaa	ggaaggcatc	cctcctgacc	agcakagggt	120
gatctttgct	gggaaacagc	tggaagatgg	acgcaccctg	tctgactaca	acatccagaa	180
agagtccacc	ctgcacctgg	tqctccgtct	cagagggtgg	atgcaaactc	tcgtgaagac	240
cctgactggg	aagaccatca	ccctcgaggt	ggagcccagt	gacaccatcg	agaatgtcaa	300
ggcaaagatc	caagataagg	aaggcatccc	tcctgatcag	cagagggtga	tctttgctgg	360
gaaacagctg	gaagatggac	gcaccctgtc	tgactacaac	atccagaaaag	agtccactct	420
gcacttggtc	ctgcgcttga	gggggggtgt	ctaagtttcc	ccttttaagg	tttcaacaaa	480
tttcattgca	ctttcctttc	aataaagttg	ttgcattc			518

<210> 153

<211> 542

<212> DNA

<213> Homo sapien

<400> 153

gcgcgggtgc	gtggggccact	gggtgaccga	cttagcctgg	ccagactctc	agcacctgga	60
agcgccccga	gagtgcacgc	gtgaggctgg	gagggaggac	ttggcttgag	cttgtaaac	120
tctgctctga	gcctccttgt	cgctgcatt	tagatggctc	ccgcaaagaa	gggtggcgag	180
aagaaaaagg	gccgttctgc	catcaacgaa	gtggtaaccc	gagaatacac	catcaacatt	240
cacaagcgca	tccatggagt	gggcttcaag	aagcgtgcac	ctcgggcact	caaagagatt	300
cggaaatttg	ccatgaagga	gatgggaact	ccagatgtgc	gcattgacac	caggctcaac	360
aaagctgtct	gggccaaaagg	aataaggaat	gtgccatacc	gaatccgtgt	gcggtgtgct	420
agaaaacgta	atgaggatga	agattcacca	aataagctat	atactttggt	tacctatgta	480
cctgttacca	ctttcaaaaa	tctacagaca	gtcaatgtgg	atgagaacta	atcgtgtatc	540
gt						542

<210> 154

<211> 411

<212> DNA

<213> Homo sapien

<400> 154

aattctttat	ttaaataaac	aaactcatct	tcctcaagcc	ccagaccatg	gtaggcagcc	60
ctccctctcc	atccctctac	cccacccctt	agccacagtg	aagggaatgg	aaaatgagaa	120
gccacgaggg	cccttgccag	ggaaggctgc	cccagatgtg	tggtgagcac	agtcagtgc	180
gctgtggctg	gggcagcagc	tgccacaggc	tcctccctat	aaattaagtt	cctgcagcca	240
cagctgtggg	agaagcatat	ttgtagaagc	aaggccagtc	cagcatcaga	aggcagaggc	300

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agcatcagtg actcccagcc atggaatgaa cggaggacac agagctcaga gacagaacag      360
gccaggggga agaaggagag acagaatagg ccagggcatg gcggtgaggg a                411

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<210> 155

<211> 421

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(421)

<223> n = A,T,C or G

<400> 155

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tgatgaatct ggggtgggctg gcagtagccc gagatgatgg gctcttctct ggggatccca      60
actggttccc taagaaatcc aaggagaatc ctcggaactt ctcgataac cagctgcaag      120
agggcaagaa cgtgatcggg ttacagatgg gcaccaaccg cggggcgtct cangcaggca      180
tgactggcta cgggatgcca cgccagatcc tctgatccca ccccaggcct tgccctgcc      240
ctcccacgaa tggttaatat atatgtagat atatatttta gcagtacat tcccagagag      300
ccccagagct ctcaagctcc tttctgtcag ggtggggggg tcaagcctgt cctgtcacct      360
ctgaagtgcc tgctggcatc ctctcccca tgcttactaa tacattccct tccccatagc      420
c                                                                421

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<210> 156

<211> 670

<212> DNA

<213> Homo sapien

<400> 156

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agcggagctc cctcccctgg tggctacaac ccacacacgc caggctcagg catcgagcag      60
aactccagcg actgggtaac cactgacatt cagggtgaagg tgcgggacac ctacctggat      120
acacaggtgg tgggacagac aggtgtcatc cgcagtgtca cggggggcat gtgctctgtg      180
tacctgaagg acagtgaaga ggttgtcagc atttccagtg agcacctgga gcctatcacc      240
cccaccaaga acaacaaggt gaaagtgatc ctgggcgagg atcgggaagc cacgggcgtc      300
ctactgagca ttgatggtga ggatggcatt gtccgtatgg acctgatga gcagctcaag      360
atcctcaacc tccgcttccct ggggaagctc ctggaagcct gaagcaggca gggccggtgg      420
acttcgtcgg atgaagagtg atcctccttc cttccctggc ccttggtgtg gacacaagat      480
cctcctgcag ggcctaggcg attgttctgg atttcctttt gttttcctt ttaggtttcc      540
atcttttccc tccctggtgc tcattggaat ctgagtagag tctgggggag ggtccccacc      600
ttcctgtacc tccctccccc agcttgcttt tgttgtaccg tctttcaata aaaagaaqct      660
gtttggtcta                                                                670

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<210> 157

<211> 421

<212> DNA

<213> Homo sapien

<400> 157

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ggttcacagc actgctgctt gtgtgttgcc ggccaggaat tccaggetca caaggctatc      60
ttagcagctc gttctccggt ttttagtgcc atgtttgaac atgaaatgga ggagagcaaa      120
aagaatcgag ttgaaatcaa tgatgtggag cctgaagttt ttaaggaaat gatgtgcttc      180
atttacacgg ggaaggctcc aaacctcgac aaaatggctg atgatttgct ggcagctgct      240
gacaagtatg ccctggagcg cttaaaggtc atgtgtgagg atgccctctg cagtaacctg      300
tccgtggaga acgctgcaga aattctcatc ctggccgacc tccacagtgc agatcagttg      360
aaaactcagg cagtggattt catcaactat catgcttcgg atgtcttgga gacctcttgg      420

```

g

421

<210> 158
 <211> 321
 <212> DNA
 <213> Homo sapien

<400> 158
 tcgtagccat ttttctgctt ctttggagaa tgacgccaca ctgactgctc attgtcgttg 60
 gttccatgcc aattggtgaa atagaacctc atccggtagt ggagccggag ggacatcttg 120
 tcatcaacgg tgatggtgcg atttggagca taccagagct tgggtgttctc gccatacagg 180
 gcaaagaggt tgtgacaaag aggagagata cggcatgcct gtgcagccct gatgcacagt 240
 tcctctgctg tgtactctcc actgccccagc cggaggggct cctgtccga cagatagaag 300
 atcaattcca cccctggctt g 321

<210> 159
 <211> 596
 <212> DNA
 <213> Homo sapien

<400> 159
 tggcacactg ctcttaagaa actatgawga tctgagattt ttttgtgtat gtttttgact 60
 cttttgagtg gtaatcatat gtgtctttat agatgtacat acctccttgc acaaattggag 120
 ggggaattcat tttcatcact gggagtgtcc ttagtgtata aaaacccatgc tggatatagg 180
 cttcaagttg taaaaatgaa agtgacttta aaagaaaata ggggatgggc caggatctcc 240
 actgataaga ctgttttttaa gtaacttaag gacctttggg tctacaagta tatgtgaaaa 300
 aaatgagact tactgggtga ggaaattcat tgtttaaaga tggtcgtgtg tgtgtgtgtg 360
 tgtgtgtgtg ttgtgttgtg ttttgttttt taagggaggg aatttattat ttaccgttgc 420
 ttgaaattac tgkgtaaata tatgtytgat aatgatttgc tytttgvcma ctaaaattag 480
 gvctgtataa gtwctaratg cmtccctggg kgttgatytt ccmagatatt gatgatamcc 540
 cttaaaattg taaccygcct ttttcccttt gctytcmatl aaagtctatt cmaaag 596

<210> 160
 <211> 515
 <212> DNA
 <213> Homo sapien

<400> 160
 gggggtaggc tctttattag acggttattg ctgtactaca gggtcagagt gcagtgtaaag 60
 cagtgtcaga ggcccgcgtt cagcccaaga atgtggattt tctctcccta ttgatcacag 120
 tgggtgggtt tcttcagaaa agccccagag gcagggacca gtgagctcca aggttagaag 180
 tggaactgga aggcttcagt cacatgctgc ttccacgctt ccaggctggg cagcaaggag 240
 gagatgccca tgacgtgcca ggtctcccca tctgacacca gtgaagtctg gtaggacagc 300
 agccgcacgc ctgcctctgc caggaggcca atcatggtag gcagcattgc agggtcagag 360
 gtctgagtcg ggaataggag caggggcagg tccctgcgga gaggcacttc tggcctgaag 420
 acagctccat tgagcccctg cagtacaggy gtagtgcctt ggaccaagcc cacagcctgg 480
 taaggggagc ctgccagggc cacggccagg aggca 515

<210> 161
 <211> 936
 <212> DNA
 <213> Homo sapien

<400> 161
 taattttctta gtcgtttgga atccttaagc atgcaaaagc tttgaacaga agggttcaca 60

aaggaaccag	ggttgcttta	tggcatccag	ttaagccaga	gctgggaatg	cctctgggtc	120
atccacatca	ggagcagaag	cacttgactt	gtcggtcctg	ctgccacggt	ttgggogccc	180
accacgccc	cgtccacctc	gtcctccctt	gccgccacgt	cctgggcggc	caaggtctcc	240
aaaattgate	tccagctgag	acgttatatc	atgttgctggc	ttccggaaat	gatgggtccat	300
aaccgaatct	tcagcatgag	cctcttcact	ctttgattta	tgaagaacaa	atcccttctt	360
ccactgccc	tcagcacctt	catttggttt	tggatatta	aattctactt	ttgcccgggtc	420
cttattttga	atagccttcc	actcatccaa	agtcatctct	tttgaccctt	cctcttttac	480
ctcttcaact	tcattctcct	tattttcagt	gtctgccact	ggatgatgtt	cttcaccttc	540
aggtgtttcc	tcagtcacat	ttgattgac	caagtcagtt	aattcgtctt	tgacagttcc	600
ccagttgtga	gacccgctac	ctccacgttt	gtcctcgtgc	ttcaggccag	atctatcact	660
tccactatgc	ctatcaaatt	cacgtttgcc	acgagaatca	aatccatctc	ctcggcccat	720
tccacgtcca	cggccccctc	gacctcttcc	aagaccacca	cgacctcgaa	taggtcgggtc	780
aataatcggt	ctatcaactg	aaaattcgcc	tccttcaccc	ttttcttcaa	gtggcttttc	840
gaatcttcgt	tcacgaggtg	gtgcgcttcc	tgggtctcta	tcaattattt	tcccttcacc	900
ctgaagttgt	tgatcaggtc	ttcttccaac	tgcgtgc			936

<210> 162

<211> 950

<212> DNA

<213> Homo sapien

<400> 162

aagcggatgg	acctgagtca	gccgaatcct	agcccccttc	cttgggcctg	ctgtgggtgct	60
cgacatcagt	gacagacgga	agcagcagac	catcaaggct	acgggagggc	cggggcgctt	120
gcgaagatga	agtttggtcg	cctctccttc	cggcagcctt	atgctggctt	tgtcttaaatt	180
ggaatcaaga	ctgtggagac	gcgctggcgt	cctctgctga	gcagccagcg	gaactgtacc	240
atcgccgtcc	acattgctca	cagggactgg	gaaggcgatg	cctgtcggga	gctgctgggtg	300
gagagactcg	ggatgactcc	tgctcagatt	caggccttgc	tcaggaaagg	ggaaaagtgt	360
ggtcgaggag	tgatagcggg	actcgttgac	attggggaaa	ctttgcaatg	ccccgaagac	420
ttaactccc	atgaggttgt	ggaactagaa	aatcaagctg	cactgaccaa	cctgaagcag	480
aagtacctga	ctgtgatctc	aaaccccagg	tggttactgg	agcccatacc	taggaaagga	540
ggcaaggatg	tattccaggt	agacatccca	gagcacctga	tccctttggg	gcatgaagtg	600
tgacaagtgt	gggctcctga	aaggaatgtt	ccrgagaaac	cagctaaatc	atggcacctt	660
caatttgcca	tcgtgacgca	gacctgtata	aattaggtta	aagatgaatt	tccactgctt	720
tggagagtcc	caccacttaa	gcactgtgca	tgtaaacagg	ttcctttgct	cagatgaagg	780
aagtaggggg	tggggctttc	cttgtgtgat	gcctccttag	gcacacaggc	aatgtctcaa	840
gtactttgac	cttagggtag	aaggcaaaag	tgccagtaaa	tgtctcagca	ttgctgctaa	900
ttttggctct	gctagtcttc	ggattgtaca	aataaatgtg	ttgtagatga		950

<210> 163

<211> 475

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(475)

<223> n = A,T,C or G

<400> 163

tcgagcggcc	gcccgggcag	gtgtcggagt	ccagcacggg	aggcgtgggtc	ttgtagttgt	60
tctccggctg	cccattgtct	tcccactcca	cggcgatgtc	gctgggatag	aagcctttga	120
ccaggcaggt	caggtgacc	tggttcttgg	tcatctcttc	ccgggatggg	ggcaggggtgt	180
acacctgtgg	ttctcggggc	tgccctttgg	ctttggagat	ggttttctcg	atgggggctg	240
ggagggcttt	gttggagacc	ttgcacttgt	actccttgcc	attcaaccag	tcctggtgca	300

ngacgggtgag	gacgctnacc	acacgggtacg	ngctgggtgta	ctgctcctcc	cgcggcctttg	360
tcttggcatt	atgcacctcc	acgccgtcca	cgtaccaatt	gaacttgacc	tcagggtctt	420
cgtggctcac	gtccaccacc	acgcatgtaa	cctcaaanct	cggncgcgan	cacgc	475

<210> 164

<211> 476

<212> DNA

<213> Homo sapien

<400> 164

agcgtgggtcg	cggccgaggt	ctgagggttac	atgcgtgggtg	gtggacgtga	gccacgaaga	60
ccctgagggtc	aagttcaact	ggtacgtgga	cggcgtgggag	gtgcataatg	ccaagacaaa	120
gccgcggggag	gagcagtaca	acagcacgta	ccgtgtgggtc	agcgtcctca	ccgtcctgca	180
ccaggactgg	ctgaatggca	aggagtacaa	gtgcaagggtc	tccaacaaaag	ccctcccagc	240
ccccatcgag	aaaaccatct	ccaaagccaa	agggcagccc	cgagaaccac	aggtgtacac	300
cctgccccca	tcccgggagg	agatgaccaa	gaaccagggtc	agcctgacct	gcctgggtcaa	360
aggcttctat	cccagcgaca	tcgcccgtgg	agtgggagag	caatgggcag	ccggagaaca	420
actacaagac	cacgcctccc	gtgctggact	ccgacacctg	ccgggcggcc	gctcga	476

<210> 165

<211> 256

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(256)

<223> n = A,T,C or G

<400> 165

agcgtgggttn	cggccgaggt	cccaaccaag	gctgcanct	ggatgccatc	aaagtcttct	60
gcaacatgga	gactgggtgag	acctgcgtgt	acccactca	gccagtggtg	gcccagaaga	120
actggtacat	cagcaagaac	cccaaggaca	agaggcatgt	ctggttcggc	gagagcatga	180
ccgatggatt	ccagttcgag	tatggcggcc	agggctccga	ccctgccgat	gtggacctgc	240
ccgggcggnc	gctcga					256

<210> 166

<211> 332

<212> DNA

<213> Homo sapien

<400> 166

agcgtgggtcg	cggccgaggt	caagaacccc	gcccgcacct	gccgtgacct	caagatgtgc	60
cactctgact	ggaagagtgg	agagtactgg	attgacccca	accaaggctg	caacctggat	120
gccatcaaag	tcttctgcaa	catggagact	ggtgagacct	gcgtgtacct	cactcagccc	180
agtgtggccc	agaagaactg	gtacatcagc	aagaacccca	aggacaagag	gcatgtctgg	240
ttcggcgaga	qcatgaccga	tggattccag	ttcgagtatg	gcggccaggg	ctccgaccct	300
gccgatgtgg	acctgcccgg	gcggccgctc	ga			332

<210> 167

<211> 332

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature
 <222> (1)...(332)
 <223> n = A,T,C or G

<400> 167
 tcgagcgggtc gcccgggcag gtccacatcg gcaggggtcgg agccctggcc gccatactcg 60
 aactggaatc catcggnatc gctctcgccg aaccagacat gcctcttgnc cttgggggttc 120
 ttgctgatgt accagntctt ctggggccaca ctgggctgag tgggggtacac gcaggtctca 180
 ccantctcca tgttgcanaa gactttgatg gcatccaggt tgcagccttg gttgggggtca 240
 atccagtact ctccactctt ccagacagag tggcacatct tgagggtcacg gcaggtgcgg 300
 gcgggggttct tgacctcggt cgcgaccacg ct 332

<210> 168
 <211> 276
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(276)
 <223> n = A,T,C or G

<400> 168
 tcgagcgggcc gcccgggcag gtccctctca gagcggtagc tgttcttatt gccccggcag 60
 cctccataga tnaagttatt gcangagttc ctctccacgt caaagtacca gcgtgggaag 120
 gatgcacggc aaggcccagt gactgcgttg gcggtgcagt attcttcata gttgaacata 180
 tcgctggagt ggacttcaga atcctgcctt ctgggagcac ttgggacaga ggaatccgct 240
 gcattctctgc tggtaggacct cggccgcgac cacgct 276

<210> 169
 <211> 276
 <212> DNA
 <213> Homo sapien

<400> 169
 agcgtgggtcg cggccgaggt ccaccagcag gaatgcagcg gattcctctg tcccaagtgc 60
 tcccagaagg caggattctg aagaccactc cagcgatatg ttcaactatg aagaatactg 120
 caccgccaac gcagtcactg ggccttgccg tgcaccttc ccacgtggt actttgacgt 180
 ggagaggaac tcttgcaata acttcatcta tggaggctgc cggggcaata agaacaqcta 240
 ccgctctgag gaggacctgc ccgggcggcc gctcga 276

<210> 170
 <211> 332
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(332)
 <223> n = A,T,C or G

<400> 170
 tcgagcgggcc gcccgggcag gtccacatcg gcaggggtcgg agccctggcc gccatactcg 60
 aactggaatc catcggtcat gctctcgccg aaccagacat gcctcttgtc cttgggggttc 120
 ttgctgatgt accagttctt ctggggccaca ctgggctgag tgggggtacac gcaggtctca 180

ccagtcctcca	tgttgcagaa	gactttgatg	gcatccaggt	tgcagccttg	gttgggggtca	240
atccagtact	ctccactctt	ccagccagaa	tggcacatct	tgaggtcacg	gcangtgccg	300
gcgggggttct	tgacctcggc	cgcgaccacg	ct			332

<210> 171
 <211> 333
 <212> DNA
 <213> Homo sapien

<400> 171						
agcgtgggtcg	cggccgaggt	caagaaaccc	cgcccgccacc	tgccgtgacc	tcaagatgtg	60
ccactctggc	tgggaagagt	gagagtactg	gattgaccce	aaccaaggct	gcaacctgga	120
tgccatcaaa	gtcttctgca	acatggagac	tggtagagacc	tgcgtgtacc	ccactcagcc	180
cagtgtggcc	cagaagaact	ggtacatcag	caagaacccc	aaggacaaga	ggcatgtctg	240
gctcggcgag	agcatgaccg	atggattcca	gttcgagtat	ggcggccagg	gctccgaccc	300
tgccgatgtg	gacctgcccg	ggcggccgct	cga			333

<210> 172
 <211> 527
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(527)
 <223> n = A,T,C or G

<400> 172						
agcgtgggtcg	cggccgaggt	cctgtcagag	tggcactggg	agaagntcca	ggaaccctga	60
actgtaaggg	ttcttcatca	gtgccaacag	gatgacatga	aatgatgtac	tcagaagtgt	120
cctgnaatgg	ggcccatgan	atggttgnet	gagagagagc	ttcttgtcct	acattcggcg	180
ggtatgggtct	tggcctatgc	cttatggggg	tggccgttgn	gggcgggtgng	gtccgcctaa	240
aaccatgttc	ctcaaagatc	atgtgttgcc	caacactggg	ttgctgacca	naagtgccag	300
gaagctgaat	accatttcca	gtgtcatacc	cagggtgggt	gacgaaaggg	gtctttttaa	360
ctgtggaagg	aacatccaaag	atctctgntc	catgaagatt	ggggtgtgga	agggttacca	420
gttgggggaag	ctcgtgtgtct	ttttccttcc	aatcangggc	tcgctcttct	gaatattctt	480
cagggcaatg	acataaattg	tatatctcgg	tcccggttcc	aggccag		527

<210> 173
 <211> 635
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(635)
 <223> n = A,T,C or G

<400> 173						
tcgagcgggc	gcccgggcaq	gtccaccaca	cccaattcct	tgctgggtatc	atggcagccg	60
ccacgtgcca	ggattaccgg	ctacatcatc	aagtatgaga	agcctgggtc	tcctcccaga	120
gaagtgggtcc	ctcggccccg	ccctgggtgtc	acagaggcta	ctattactgg	cctggaaccg	180
ggaaccgaat	atacaattta	tgtcattgcc	ctgaagaata	atcagaagag	cgagcccctg	240
attggaagga	aaaagacaga	cgagcttccc	caactggtaa	cccttccaca	ccccaatctt	300
catggaccag	agatcttgga	tgttccttcc	acagttcaaa	agaccctttt	cgtcaccac	360

cctgggtatg	acactggaaa	tggatttcag	cttcctggca	cttctgggtca	gcaacccagt	420
gttgggcaac	aaatgatctt	tgangaacat	ggnttttaggc	ggaccacacc	ggccacaacg	480
ggcaccacca	taaggcatag	gccaagaaca	taccgcncga	atgtaggaca	agaagctctn	540
tctcanacaa	ncatctcatg	ggccccattc	cangacactt	ctgagtacat	canttcattg	600
catcctgggtg	gcactgataa	aaacccttac	agtta			635

<210> 174

<211> 572

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(572)

<223> n = A,T,C or G

<400> 174

agcgtgggtcg	cgggcgaggt	cctgtcagag	tggcactggg	agaagttcca	ggaaccctga	60
actgtaaggg	ttcttcatca	gtgccaacag	gatgacatga	aatgatgtac	tcagaagtgt	120
cctggaatgg	ggcccatgag	atggttgtct	gagagagagc	ttcttgtcct	acattcggcg	180
ggtatggtct	tggcctatgc	cttatggggg	tggccgttgt	gggcgggtgtg	gtccgcctaa	240
aaccatgttc	ctcaaagatc	atttgttgcc	caacactggg	ttgctgacca	gaagtgccag	300
gaagctgaat	accatttcca	gtgtcatacc	caggggtggg	gacgaaaggg	gtcttttgaa	360
ctgtggaagg	aacatccaag	atctctgggc	catgaagatt	ggggtgtgga	agggttacca	420
gttggggaag	ctcgtctgtc	tttttccttc	caatcanggg	ctcgtctctc	tgattattct	480
tcagggcaat	gacataaatt	gtatatctcg	ntcccggtgn	cagccaataa	taataaccct	540
ctgtgacacc	anggcggggc	cgaaggancca	ct			572

<210> 175

<211> 372

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(372)

<223> n = A,T,C or G

<400> 175

agcgtgggtcg	cggccgaggt	cctcaccaga	ggtaccacct	acaacatcat	agtggaggga	60
ctgaaagacc	agcagaggca	taaggttcgg	gaagaggttg	ttaccgtggg	caactctgtc	120
aacgaaggct	tgaaccaacc	tacggatgac	tcgtgctttg	accctacac	agtttcccat	180
tatgccgttg	gagatgagtg	ggaacgaatg	tctgaatcag	gctttaaact	gttgtgccag	240
tgcttanget	ttggaagtgg	tcattttcaga	tgtgattcat	ctagatgggtg	ccatgacaat	300
ggtgtgaact	acaagattgg	agagaagtgg	gaccgtcagg	gagaaaatgg	acctgcccgg	360
gcggccgctc	ga					372

<210> 176

<211> 372

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(372)

<223> n = A,T,C or G

<400> 176

tcgagcggcc	gcccgggcag	gtccattttc	tccctgacgg	tcccacttct	ctccaatctt	60
gtagttcaca	ccattgtcat	ggcaccatct	agatgaatca	catctgaaat	gaccacttcc	120
aaagcctaag	cactggcaca	acagtttaaa	gcctgattca	gacattcggt	cccactcatc	180
tccaacggca	taatgggaaa	ctgtgtaggg	gtcaaagcac	gagtcacccg	taggttggtt	240
caagccttcg	ntgacagagt	tgcccacggt	aacaacctct	tcccgaacct	tatgcctctg	300
ctggtctttc	agtgcctcca	ctatgatgtt	gtaggtggta	cctctggtga	ggacctcggc	360
cgcgaccacg	ct					372

<210> 177

<211> 269

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(269)

<223> n = A,T,C or G

<400> 177

agcgtggccg	cggccgaggt	ccattggctg	gaacggcatc	aacttggaag	ccagtgatcg	60
tctcagcctt	ggttctccag	ctaattggtg	tggnggtctc	agtagcatct	gtcacacgag	120
cccttcttgg	tgggctgaca	ttctccagag	tggtgacaac	accctgagct	ggtctgcttg	180
tcaaagtgtc	cttaagagca	tagacactca	cttcatattt	ggcgnccacc	ataagtcctg	240
atacaaccac	ggaatgacct	gtcaggaac				269

<210> 178

<211> 529

<212> DNA

<213> Homo sapien

<400> 178

tcgagcggcc	gcccgggcag	gtcctcagac	cgggttctga	gtacacagtc	agtgtggttg	60
ccttgcacga	tgatatggag	agccagcccc	tgattggaac	ccagtcacaca	gctattcctg	120
caccaactga	cctgaagttc	actcagggtca	caccacaaag	cctgagcgcc	cagtggacac	180
cacccaatgt	tcagctcact	ggatatcgag	tgcggtgac	ccccaaaggag	aagaccggac	240
caatgaaaga	aatcaacctt	gtccttgaca	gtcatccgt	ggttgatatca	ggacttatgg	300
cggccacca	atatgaagtg	agtgtctatg	ctcttaagga	cactttgaca	agcagaccag	360
ctcaggggtg	tgtcaccact	ctggagaatg	tcagcccacc	aagaagggtc	cgtgtgacag	420
atgctactga	gaccaccatc	accattagct	ggagaaccaa	gactgagacg	atcactggct	480
tccaagttga	tgccgttcca	gccaatggac	ctcgcccgcg	accacgctt		529

<210> 179

<211> 454

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(454)

<223> n = A,T,C or G

<400> 179

```

agcgtgggtcg cggccgaggt ctggccgaac tgccagtgtg caggggaagat gtacatgtta      60
tagntcttct cgaagtcccg ggccagcagc tccacggggt ggtctcctgc ctccaggcgc      120
ttctcattct catggtatct cttcaccgcg agcttctgct tctcagtcag aaggttgttg      180
tcctcatccc tctcatcacg ggtgaccagg acgttcttga gccagtcccg catgcgcagg      240
gggaattcgg tcagctcaga gtccaggcaa ggggggatgt atttgcaagg cccgatgtag      300
tccaagtgga gcttgtggcc cttcttggtg ccctccaagg tgcactttgt ggcaaagaag      360
tggcaggaag agtcgaaggt cttgttggtc ttgctgcaca ccttctcaaa ctcgccaatg      420
ggggctgggc agacctgccc gggcgggcgc tcga                                     454

```

<210> 180

<211> 454

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(454)

<223> n = A,T,C or G

<400> 180

```

tcgagcgggc gcccgggcag gtctgcccag cccccattgg cgagtttgag aaggngtgca      60
gcaatgacaa caagaccttc gactcttctt gccacttctt tgccacaaag tgcaccctgg      120
agggcaccaa gaagggccac aagctccacc tggactacat cgggccttgc aaatacatcc      180
ccccttgccct ggactctgag ctgaccgaat tccccctgcg catgcgggac tggctcaaga      240
acgtcctggt caccctgtat gagagggatg aggacaacaa cttctgact gagaagcana      300
agctgcgggt gaagaanatc catgagaatg anaagcgcct gnaggcanga gaccaccccg      360
tggagctgct ggcccgggac ttcgagaaga actataacat gtacatcttc cctgtacact      420
ggcagttcgg ccagacctcg gccgcgacca cgct                                     454

```

<210> 181

<211> 102

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(102)

<223> n = A,T,C or G

<400> 181

```

agcgtggntg cggacgacgc ccacaaagcc attgtatgta gttttanttc agctgcaaan      60
aataccncca gcatccacct tactaaccag catatgcaga ca                               102

```

<210> 182

<211> 337

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(337)

<223> n = A,T,C or G

<400> 182

```

tcgagcggtc gcccgggcag gtctgggcgg atagcaccgg gcatattttg gaatggatga      60

```

ggtctggcac	cctgagcagc	ccagcagagga	cttgggtctta	gttgagcaat	ttggctagga	120
ggatagtatg	cagcacgggt	ctgagtctgt	gggatagctg	ccatgaagna	acctgaagga	180
ggcgctggct	ggtanggggt	gattacaggg	ctgggaacag	ctcgtaact	tgccattctc	240
tgcatatact	ggntagttag	gcgagcctgg	cgctcttctt	tgcgctgagc	taaagctaca	300
tacaatggct	ttgnngacct	cggccgcgac	cacgctt			337

<210> 183

<211> 374

<212> DNA

<213> Homo sapien

<400> 183

tcgagcggcc	gcccgggcag	gtccattttc	tccttgacgg	tcccacttct	ctccaatctt	60
gtagttcaca	ccattgtcat	gacaccatct	agatgaatca	catctgaaat	gaccacttcc	120
aaagcctaag	cactggcaca	acagttttaa	gcctgattca	gacattcggt	cccactcatc	180
tccaacggca	taatgggaaa	ctgtgtaggg	gtcaaagcac	gagtcacccg	taggttggtt	240
caagccttcg	ttgacagaag	ttgccacagg	taacaacctc	ttcccgaacc	ttatgcctct	300
gctggtcttt	caagtgcctc	cactatgatg	ttgtaggtgg	cacctctggg	gaggacctcg	360
gccgcgacca	cgct					374

<210> 184

<211> 375

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(375)

<223> n = A,T,C or G

<400> 184

agcgtggttt	gcggccgagg	tcctcaccan	aggtgccacc	tacaacatca	tagtggaggg	60
actgaaagac	cagcagaggc	ataaggttcg	ggaagaggtt	gttaccgtgg	gcaactcrgt	120
caacgaaggc	ttgaaccaac	ctacggatga	ctcgtgcttt	gacccctaca	caqnttccca	180
ttatgccgtt	ggagatgagt	gggaacgaat	gtctgaatca	ggcttttaaac	tggtgtqcca	240
gtgcttangc	tttggaagtg	gtcatttcag	atgtgattca	tctanatggg	gtcatqacaa	300
tggtgngaac	tacaagattg	gagagaagtg	gnaccgtcag	ggganāaaat	ggacctgccc	360
gggcggcncg	ctcga					375

<210> 185

<211> 148

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(148)

<223> n = A,T,C or G

<400> 185

agcgtggtcg	cggccgaggt	ctggcttntc	gctcangtga	ttatcctgaa	ccatccaggc	60
caaataagcg	ccggctatgc	ccctgnattg	gattgccaca	cggctcacat	tgcatgcaag	120
tttgctgagc	tgaaggaaaa	gattgatc				148

<210> 186

<211> 397
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(397)
 <223> n = A,T,C or G

<400> 186
 tcgagcggcc gcccgggcag gtccaattga aacaaacagt tctgagaccg ttcttccacc 60
 actgattaag agtggggngg cgggtattag ggataatatt catttagcct tctgagcttt 120
 ctgggcagac ttggtgacct tgccagctcc agcagccttc tgggtccactg ctttgatgac 180
 acccaccgca actgtctgtc tcatatcacg aacagcaaag cgacccaaag gtggatagtc 240
 tgagaagctc tcaacacaca tgggcttgcc aggaaccata tcaacaatgg gcagcatcac 300
 cagacttcaa gaatttaagg gccatcttcc agctttttac cagaacggcg atcaatcttt 360
 tccttcagct cagcaaactt gcatgcaatg tgagccg 397

<210> 187
 <211> 584
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(584)
 <223> n = A,T,C or G

<400> 187
 tcgagcggcc gcccgggcag gtccagaggg ctgtgctgaa gtttgctgct gccactggag 60
 ccactccaat tgctggccgc ttcaactcctg gaaccttcac taaccagatc caggcagcct 120
 tccgggagcc acggcttctt gtggntactg accccagggc tgaccaccag cctctcacgg 180
 aggcattcta tgttaacctt cctaccattg cgctgtgtaa cacagattct cctctgcgct 240
 atgtggacat tgccatccca tgcaacaaca agggagctca ctcagnnggg tttgatgtgg 300
 tggatgctgg ctcgggaagt tctgcgcatg gatcctgaag agattgaaaa agaagaacag 360
 gangncatgc ctgatctgga cttctacaga gatcctgaag agattgaaaa agaagaacag 420
 gctgnttgct ganaaagcaa gtgaccaagg angaaatttc angggtgaaa nggactgctc 480
 ccgctcctga attcactgct actcaacctg angntgcaga ctgggtcttga aggnagnacan 540
 gggccctctg ggcctattta agcancttcg gtcgcgaaca cgnt 584

<210> 188
 <211> 579
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(579)
 <223> n = A,T,C or G

<400> 188
 agcgtgngtc gcggccgagg tgctgaatag gcacagaggg cacctgtaca ccttcagacc 60
 agtctgcaac ctccaggctga gtagcagtga actcaggagc gggagcagtc cattcaccct 120
 gaaattcctc cttggncact gccttctcag cagcagcctg ctcttctttt tcaatctctt 180
 caggatctct gtagaagtac agatcaggca tgacctccca tgggtgttca cgggaaatgg 240

tgccacgcat	gcgcagaact	tcccgagcca	gcateccacca	catcaaacc	actgagtgag	300
ctcccttggt	gttgcattgg	atgggcaatg	tccacatagc	gcagaggaga	atctgtgtta	360
cacagcgcaa	tggtaggtag	gttaacataa	gatgcctccg	cgagaagctg	gtggtcagcc	420
ctgggggtcaa	gtaaccacaa	gaagccgtgg	ctcccggaag	gctgcctgga	tctggtagt	480
gaagntcca	ggagtgaagc	ggccaacaat	tggagtggct	tcagtggcaa	gcagcaaact	540
tcagcacaag	ccctctggac	ctgcccggcg	gccgctcga			579

<210> 189

<211> 374

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(374)

<223> n = A,T,C or G

<400> 189

tcgagcggcc	gccggggcag	gtccattttc	tccctgacgg	ncccacttct	ctccaatctt	60
gtagttcaca	ccattgtcat	ggcaccatct	agatgaatca	catctgaaat	gaccacttcc	120
aaagcctaag	cactggcaca	acagtttaaa	gcctgattca	gacattcggt	cccactcatc	180
tccaacggca	taatgggaaa	ctgtgtaggg	gtcaaaqcac	gagtcacccg	taggttggtt	240
caagccttcg	ttgacagagt	tgcccacggt	aacaacctcn	tccccgaacc	ttatgcctct	300
gctgggcttt	cagngcctcc	actatgatgn	tgtagggggg	cacctctggn	gangacctcg	360
gccgcgacca	cgt					374

<210> 190

<211> 373

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(373)

<223> n = A,T,C or G

<400> 190

agcgtgggtc	cggccgaggt	cctcaccaga	ggtgccacct	acaacatcat	agtggaggca	60
ctgaaagacc	agcagaggca	taaggctcgg	gaagaggttg	ttaccgtggg	caactctgtc	120
aacgaaggct	tgaaccaacc	tacggatgac	tcgtgctttg	accctacac	agtttcccat	180
tatgccgttg	gagatgagt	ggaacgaatg	tctgaatcag	gctttaaact	gttgtgccag	240
tgcttangct	ttggaagtgg	gtcatttcag	atgtgattca	tctagatggt	gccatgacaa	300
tggngngaac	tacaagattg	gagagaagt	gnaccgncag	ggagaaaatg	gacctgcccg	360
ggcggccgct	cga					373

<210> 191

<211> 354

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(354)

<223> n = A,T,C or G

<400> 191

agcgtgggtcg	cgggccgaggt	ccacatcggc	agggtcggag	ccctggccgc	catactcgaa	60
ctggaatcca	tcggtcatgc	tctcgccgaa	ccagacatgc	ctcttgtcct	tggggttctt	120
gctgatgtac	cagttcttct	gggccacact	gggctgagt	gggtacacgc	aggtctcacc	180
agtctccatg	ttgcagaaga	ctttgatggc	atccaggntg	caaccttggt	tggggccaat	240
ccagtactct	ccactcttcc	agccagagtg	gcacatcttg	aggtcacggc	aggtgcggnc	300
gggggntttt	gcggctgccc	tctggntctc	ggntgtntct	natctgctgg	ctca	354

<210> 192

<211> 587

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(587)

<223> n = A,T,C or G

<400> 192

tcgagcggcc	gcccgggcag	gtctcgcggt	cgcactgggtg	atgctgggtcc	tgttggtccc	60
cccggccctc	ctggacctcc	tggcccccct	ggtcctccca	gcgctgggtt	cgacttcagc	120
ttcttgcccc	agccacctca	agagaaggct	cacgatgggtg	gccgctacta	ccgggctgat	180
gatgccaatg	tggttcgtga	ccgtgacctc	gaggtggaca	ccacctcaa	gagcctgagc	240
cagcagatcg	agaacatccg	gagcccagag	ggcagncgca	agaaccccgc	ccgcacctgc	300
cgtagacctca	agatgtgccca	ctctgactgg	aagagtggag	agtactggat	tgaccccaac	360
caagctgcaa	cctggatgcc	atcaaagtct	tctgcaacat	ggagactgggt	gagacctgcg	420
tgtaccccac	tcagcccagt	gtggcccaaa	agaactggta	catcagcaag	aaccccaagg	480
acaagaagca	tgtctggttc	ggcgagaaca	tgaccgatgg	attccagttc	gagtatggcg	540
ggcagggctc	cgaccctgcc	gatggggacc	ttggccgcga	acacgct		587

<210> 193

<211> 98

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(98)

<223> n = A,T,C or G

<400> 193

agcgtggng	cgcccgaggt	ataaatatcc	agnccatctc	ctccctccac	acgctganag	60
atgaagctgt	ncaaagatct	caggggtggan	aaaaccat			98

<210> 194

<211> 240

<212> DNA

<213> Homo sapien

<400> 194

tcgagcggcc	gcccgggcag	gtccttcaga	cttggactgt	gtcacactgc	caggcttcca	60
gggctccaac	ttgcagacgg	cctgttggtg	gacagtctct	gtaatcgcca	aagcaaccat	120
ggaagacctg	ggggaaaaca	ccatggtttt	atccaccttg	agatctttga	acaacttcac	180
ctctcagcgt	gcggaggagg	gctctggact	ggatatttct	acctcggccg	cgaccacgct	240

<210> 195
 <211> 400
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(400)
 <223> n = A,T,C or G

<400> 195
 cgagcgggcg accgggcagg tncagactcc aatccanana accatcaagc cagatgtcag 60
 aagctacacc atcacagggt tacaaccagg cactgactac aaganctacc tgcacacctt 120
 gaatgacaat gctcggagct cccctgtggt catcgacgcc tccactgcc a ttgatgcacc 180
 atccaacctg cgtttccttg ccaccacacc caattccttg ctggtatcat ggcagccgcc 240
 acgtgccagg attaccggta catcatcnag tatganaagc ctgggcctcc tcccagagaa 300
 gnggtccctc ggccccgccc tgntgtccca naggntacta ttactgngcc ngcaaccggc 360
 aaccgatatc nattttgnca ttggccttca acaataatta 400

<210> 196
 <211> 494
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(494)
 <223> n = A,T,C or G

<400> 196
 agcgtgggttc gcggccgang tctgtgcaga gtggcactgy tagaagttcc aggaacctg 60
 aactgtaagg gttcttcac agngccaaca ggatgacatg aaatgatgta ctcagaagtg 120
 tcttggaatg gggcccatga gatgggtgtc tgagagagag cttcttgnc tgtctttttc 180
 cttccaatca ggggctcgt cttctgatta ttcttcagg caatgacata aattgtatat 240
 tcgggtcccg gntccaggcc agtaatatga ncctctgtga caccagggcg gngccgaggg 300
 accacttctc tgggaggaga cccaggcttc tcatacttga tgatgtaacc ggtaatcctg 360
 gcacgtggcg gctgccatga taccagcaag gaattggggg gtgggtggcca ggaaacgcag 420
 gttggatggn gcatcaatgg cagtggaggc cgctcgatgac cacaggggga gctccgacat 480
 tgtcattcaa ggtg 494

<210> 197
 <211> 118
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(118)
 <223> n = A,T,C or G

<400> 197
 agcgtggncg cgggcgagggt gcagcgcggg ctgtgccacc ttctgctctc tgcccaacga 60
 taaggagggt ncctgcccc aggagaacat taactntccc cagctcggcc tctgccgg 118

<210> 198

<211> 403
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(403)
 <223> n = A,T,C or G

<400> 198
 tcgagcggcc gcccgggcag gttttttttg ctgaaagtgg ntactttatt ggntgggaaa 60
 gggagaagct gtggtcagcc caagagggaa tacagagncc cgaaaaaggg gagggcaggt 120
 gggctggaac cagacgcagg gccaggcaga aactttctct cctcactgct cagcctgggtg 180
 gtggctggag ctcanaaatt gggagtgaca caggacacct tcccacagcc attgcggcgg 240
 catttcattt ggccaggaca ctggctgtcc acctggcact ggtcccagaca gaagcccag 300
 ctggggaaaag ttaattgttca cctgggggca ggaaccctcc ttatcattgn gcagagagca 360
 gaaggtggca cagcccgcgc tgcacctcgg ccgcgaccac gct 403

<210> 199
 <211> 167
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(167)
 <223> n = A,T,C or G

<400> 199
 tcgagcggcc gcccgggcag gtccaccata agtcctgata caaccacgga tgagctgtca 60
 ggagcaaggt tgatttcttt catttggtcgg gnetttctct tgggggncac ccgcactcga 120
 tatccagtga gctgaacatt ggggtggcgc cactggggcgc tcaggct 167

<210> 200
 <211> 252
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(252)
 <223> n = A,T,C or G

<400> 200
 tcgagcgggt cgccccgggca ggtccaccac acccaattcc ttgctgggtat catggcagcc 60
 gccacgtgcc aggattaccg gctacatcat caagtatgag aagcctgggt ctccctcccag 120
 agaagcgggt cctcggccccc gccttggtgt cacagaggct actattactg gcctggaacc 180
 gggaaaccgaa tatacaattt atgtcattgn cctgaagaat aatcannaan agcgancccc 240
 tgattggaag ga 252

<210> 201
 <211> 91
 <212> DNA
 <213> Homo sapien

<400> 201
 agcgtgggtcg cggccgaggt tgtacaagct tttttttttt tttttttttt tttttttttt 60
 tttttttttt tttttttttt tttttttttt t 91

<210> 202
 <211> 368
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(368)
 <223> n = A,T,C or G

<400> 202
 tcgagcggnc gcccgggcag gtctgccaac accaagattg gcccccgccg catccacaca 60
 gtccgtgtgc ggggaggtaa caagaaatac cgtgccctga gggtggacgt ggggaatttc 120
 tcctggggct cagagtgttg tactcgtaaa acaaggatca tcgatgttgt ctacaatgca 180
 tctaataacg agctggttcg taccaagacc ctggtgaaga attgcatcgt gctcatcgac 240
 agcacaccgt accgacagtg gtacgagtcc cactatgcgc tgcccctggg ccgcaagaag 300
 ggagccaagc tgactcctga ggaagaagag attttaaaca aaaaacgata taanaaaaaa 360
 aaaacaat 368

<210> 203
 <211> 340
 <212> DNA
 <213> Homo sapien

<400> 203
 agcgtgggtcg cggccgaggt gaaatgggtat tcagcttcct ggcacttctg gtcagcaacc 60
 cagtgttggg caacaaatga tctttgagga acatggtttt aggcggacca caccgcccac 120
 aacggccacc cccataaggc ataggccaag accatacccc ccgaatgtag gacaagaagc 180
 tctctctcag acaaccatct catgggcccc attccaggac acttctgagt acatcatttc 240
 atgtcatcct gttggcactg atgaagaacc cttacagtgc agggttcctg gaacttctac 300
 cagtgccact ctgacaggac ctgcccgggc ggccgctcga 340

<210> 204
 <211> 341
 <212> DNA
 <213> Homo sapien

<400> 204
 tcgagcggcc gcccgggcag gtccgtgtcag agtggcactg gtagaagttc caggaaccct 60
 gaactgtaag gggtcttcat cagtccaac aggatgacat gaaatgatgt actcagaagt 120
 gtccgtggaat ggggcccctg agatggttgt ctgagagaga gcttcttgct ctacattcgg 180
 cgggtatggt cttggcctat gccttatggg ggtggccggt gtgggcggtg tgggtccgct 240
 aaaaccatgt tcctcaaaga tcatttggtg cccaacactg gggtgctgac cagaagtgcc 300
 aggaagctga ataccatttc acctcggccg cgaccacgct a 341

<210> 205
 <211> 770
 <212> DNA
 <213> Homo sapien

<220>

<221> misc_feature
<222> (1)...(770)
<223> n = A,T,C or G

<400> 205

tcgagcggcc	gcccgggcag	gtctcccttc	ttgcggccca	ggggcagcgc	atagtgggac	60
tcgtaccact	gtcgggtacgg	tgtgctgtcg	atgagcacga	tgcaattctt	caccaggggc	120
ttggtacgaa	ccagctcggt	attagatgca	ttgtagacaa	catcgatgat	ccttggttta	180
cgagtacaac	actctgagcc	ccaggagaaa	ttccccacgt	ccaacctcag	ggcacgggat	240
ttcttggtac	ctccccgcac	acggactgtg	tggatgcggc	gggggccaag	ctgaactcctg	300
aggaagaaga	gatttttaaac	aaaaaacgat	ctaaaaaaat	tcagaagaaa	tatgatgaaa	360
ggaaaaagaa	tgccaaaatc	agcagtctcc	tggaggagca	gttccagcag	ggcaagcttc	420
ttgcgtgcat	cgcttcaagg	ccgggacagt	gtgaccgagc	agatggctat	gtgctagagg	480
gcaaaagaag	ggagttctat	cttaagaaaa	tcaggggccca	gaatgggtng	tcttcaacta	540
atccaaaggg	gagtttcaga	ccagtgcgat	cagcaaaaaa	attgatactg	ntggccaaat	600
ttattgggtg	agggcttgca	cantangan	ggctgggtct	tggggcttgg	attggnacaa	660
gctttggcag	ccttttcttt	ggttttgcca	aaaacctttt	gntgaagang	anacctnggg	720
cggacccctt	aaccgattcc	acnccnggng	gcgttctang	gncccncttg		770

<210> 206
<211> 810
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(810)
<223> n = A,T,C or G

<400> 206

agcgtgggtc	cgcccgaggt	ctgctgcttc	agcgaagggt	ttctggcata	accaatgata	60
aggctgccaa	agactgttcc	aataccagca	ccagaaccag	ccactcctac	tgttgacgca	120
cctgcaccaa	taaatttggc	agcagtatca	atgtctctgc	tgattgcaact	ggtctgaaac	180
tccctttgga	ttagctgaga	cacaccattc	tgggcccctga	ttttcctaag	atagaactcc	240
aactctttgc	cctctagcac	atagccatct	gctcggtcac	actgtcccgg	ccttgaaaggc	300
atgcacgcaa	gaagcttgcc	ctgctggaac	tgctccctcca	ggagactgct	gattttggca	360
ttctttttcc	tttcatcata	tttcttctga	attttttttag	atcgtttttt	gtttaaaatc	420
tcttcttctc	caggagtcag	cttggccccc	gccgcattcca	cacagtccgt	gtgcggggag	480
gtaacaagaa	ataccgtgcc	ctgaggttgg	acgtggggaa	tttctcctgg	ggctcagagt	540
ggtgtactcg	taaaacaagg	atcatcgatg	gtgnctacaa	tgcatctaata	aacgagctgg	600
gtcggaccca	aagaacctgg	ngaanaaatg	gatcgntcca	tcgacaggac	accgtaccgc	660
acaggggnac	gantcccaact	atgcgcttgc	ccctggggccg	caanaaagga	aaactgcccgc	720
ggcggccntc	gaaagcccaa	ttntggaaaa	aatccatcac	actgggnggc	cngtcgagca	780
tgcatntana	ggggcccat	ccccctnann				810

<210> 207
<211> 257
<212> DNA
<213> Homo sapien

<400> 207

tcgagcggcc	gcccgggcag	gtccccaacc	aaggctgcaa	cctggatgcc	atcaaagtct	60
tctgcaacat	ggagactggg	gagacctgcg	tgtacccccc	tcagcccaggt	gtggcccaga	120
agaactggta	catcagcaag	aaccccaagg	acaagaggca	tgtctggttc	ggcgagagca	180
tgaccgatgg	attccagttc	gagtatggcg	gccaggggtc	cgaccctgcc	gatgtggacc	240

tcggccgcga ccacgct

257

<210> 208

<211> 257

<212> DNA

<213> Homo sapien

<400> 208

agcgtggtcg	cggccgaggt	ccacatcggc	agggctcggag	ccctggccgc	catactcgaa	60
ctggaatcca	tcggtcatgc	tctcgccgaa	ccagacatgc	ctcttgctct	tggggttctt	120
gctgatgtac	cagttcttct	gggccacact	gggctgagtg	gggtacacgc	aggtctcacc	180
agtctccatg	ttgcagaaga	ctttgatggc	atccaggttg	cagccttggt	tggggacctg	240
cccgggcggc	cgctcga					257

<210> 209

<211> 747

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(747)

<223> n = A,T,C or G

<400> 209

tcgagcggcc	gcccgggcag	gtccaccaca	cccaattcct	tgctggtatc	atggcagccg	60
ccacgtgcc	ggattaccgg	ctacatcatc	aagtatgaga	agcctgggtc	tcctcccaga	120
gaagtggcc	ctcgcccccg	ccctgggtgc	acagaggcta	ctattactgg	cctggaaccg	180
ggaaccgaat	atacaattta	tgtcattgcc	ctgaagaata	atcagaagag	cgagcccctg	240
attggaagga	aaaagacaga	cgagcttccc	caactggtaa	cccttccaca	ccccaatctt	300
catggaccag	agatcttgga	tgttccttcc	acagttcaaa	agaccccttt	cgtaaccac	360
cctgggtatg	acactggaaa	tggtattcag	cttcctggca	cttctggtca	gcaaccacgt	420
gttgggcaac	aaatgatctt	tgaggaacat	ggnttttaggc	ggaccacacc	gccacaacg	480
gccaccccc	taaggcatag	gccaagacca	taccgcgcga	atgtaggaca	agaagctntn	540
tntcanacac	catntnatgg	gccccattcc	aggacacttc	tgagtacatc	atttatgnca	600
tctgtggcac	ttgatgaaaa	cccttacagt	tcagggttct	ggaactttta	ccaggcctnt	660
tacaggactn	ggccggacnc	cttaagccna	ttncaccctg	gggcgttcta	nggtcccact	720
cgnnactg	ngaaaatggc	tactgtn				747

<210> 210

<211> 872

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(872)

<223> n = A,T,C or G

<400> 210

agcgtggtcg	cggccgaggt	ccactagagg	tctgtgtgcc	attgccaggg	cagagtctct	60
gcgttacaaa	ctcctaggag	ggcttgctgt	gcggagggcc	tgctatggtg	tgctgcgggt	120
catcatggag	agtggggcca	aaggctgcga	ggttgtggtg	tctgnaaac	tccnaggaca	180
ngagggctaa	attccatgaa	gtttgtggat	ggcctgatga	tccacaatcg	gagaccctgt	240
taactactac	cgtctnaccn	cctgctgtnc	nccccenttt	ctgctnaana	catngggntn	300


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ntncttgnc  ntccttgggt  ngaanatnna  atngcctncc  cnttctanc  nctactngnt  360
ccananttgg  cctttaaana  atccnccttg  ccttnnncc  tgttcanntn  tttntcgta  420
aacccatna  nttnnattan  atnntnnnn  nctaccccc  ctctcattn  anccnatang  480
ctnnnaantc  cttannnct  cccnccnnt  ncnctctac  tnantnctt  tnnccatta  540
cnnagctctt  tcntttaana  taatgnngcc  nngctctnca  tntctacnat  ntgnnaatn  600
ccccncccc  cnancgnntt  tttgacctnn  naacctcctt  tcctcttccc  tncnnaaatt  660
ncnnanttcc  ncnttccnnc  ntctcggnnt  ntcccatnct  ttccannnct  tcantctanc  720
ncnctncaac  ttattttcct  ntcctccctt  nttctttaca  nccccctnn  tctactcnnc  780
nttncatta  natttgaaac  tnccacnnt  anttncctn  ctctacnntt  ttattttncg  840
ntcnctctac  ntaatanntt  aatnanttnt  cn  872

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<210> 211

<211> 517

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(517)

<223> n = A,T,C or G

<400> 211

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tcgagcggcc  gcccgggcag  gtctgccaa  gagaccctgt  tatgctgtg  ggactggctg  60
gggcatggca  ggcggctctg  gcttcccac  cttctgttct  gagatgggg  tgggtggcag  120
tatctcatct  ttgggttcca  caatgctcac  gtggtcaggc  aggggcttct  tagggccaat  180
cttaccagtt  ggggtcccag  gcagcatgat  cttcaccttg  atgccagca  caccctgtct  240
gagcaacacg  tggcgacaaa  gcagtgtcaa  cgtagtaagt  taacagggtc  tccgctgtgg  300
atcatcaggc  catccacaaa  cttcatggat  ttagccctct  gtccctcgag  tttcccagac  360
accacaacct  cgcagccttt  ggccccactc  tccatgatga  accgcagcac  accatagcag  420
gccctccgca  caagcaagcc  ctccctaaga  tttgtaacgc  ananactctg  ctggcaatgg  480
cacacaaacc  tctagtggac  ctcggnccgc  accacgc  517

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<210> 212

<211> 695

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(695)

<223> n = A,T,C or G

<400> 212

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tcgagcggcc  gcccgggcag  gtctgggtcca  ggatagcctg  cgagtcctcc  tactgctact  60
ccagacttga  catcatatga  atcatactgg  ggagaatagt  tctgaggacc  agtagggcat  120
gattcacaga  ttccaggggg  gccaggagaa  ccaggggacc  ctgggtgtcc  tgggaatacca  180
gggtcaccat  ttctcccagg  aataccagga  gggcctggat  ctcccttggg  gccttgagggt  240
ccttgaccat  taggagggcg  agtaggagca  gttggagggt  gtgggcaaac  tgcacaacat  300
tctccaaatg  gaatttcttg  gttggggcag  tctaattctt  gatccgtcac  atattatgtc  360
atcgagagag  acggatcctg  agtcacagac  acatatttgg  catgggtctg  gcttccagac  420
atctctatcc  gncataggac  tgaccaagat  gggaacatcc  tccttcaaca  agcttnctgt  480
tgtgccaaaa  ataatagtgg  gatgaagcag  accgagaagt  anccagctcc  cctttttgca  540
caaagcntca  tcatgtctaa  atatcagaca  tgagacttct  ttggggcaaaa  aaggagaaaa  600
agaaaaagca  gttcaaagta  nccnccatca  agttgggtcc  ttgcccnttc  agcaccgggg  660
ccccgttata  aaacacctng  ggccggaccc  ccctt  695

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<210> 213
 <211> 804
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(804)
 <223> n = A,T,C or G

<400> 213

agcgtggtcg	cggccgaggt	gttttatgac	gggcccgggtg	ctgaagggca	gggaacaact	60
tgatggtgct	actttgaact	gcttttcttt	tctccttttt	gcacaaagag	tctcatgtct	120
gatatattaga	catgatgagc	tttgtgcaaa	aggggagctg	gctacttctc	gctctgcttc	180
atcccactat	tattttggca	caacaggaag	ctggtgaagg	aggatgttcc	catcttggtc	240
agtcctatgc	ggatagagat	gtctggaagc	cagaaccatg	ccaaatatgt	gtctgtgact	300
caggatccgt	tctctgcgat	gacataatat	gtgacgatca	agaattagac	tgccccaacc	360
cagaaattcc	atttggagaa	tggtgtgcag	tttgcccaca	gcctccaact	gctcctactc	420
gccctcctaa	tggtcaagga	cctcaaggcc	ccaagggaga	tccaggccct	cctggtattc	480
ctgggagaaa	tggtgaccct	ggtattccag	gacaaccagg	gtcccctggt	tctcctggcc	540
cccctggaat	cngngaatc	atgccctact	ggtcctcaaa	ctattctccc	anatgattca	600
tatgatgtca	agtctgggat	agcnagtang	ganggactcg	caggctattc	tggaccanac	660
ctgccggggg	ggcgttcgaa	agcccgaatc	tgcannntn	cnttcacact	ggcggccgtc	720
gagctgcttt	aaaagggcca	ttcnccttt	agnnggggg	antacaatta	ctnggcggcg	780
ttttanancg	cngnctggg	aaat				804

<210> 214
 <211> 594
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(594)
 <223> n = A,T,C or G

<400> 214

agcgtggtcg	cggccgaggt	ccacatcggc	agggtcggag	ccctggccgc	catactcgaa	60
ctggaatcca	tcggtcatgc	tctcgccgaa	ccagacatgc	ctcttgctct	tgggggtctt	120
gctgatgtac	cagttcttct	gggccacact	gggctgagtg	gggtacacgc	aggtctcacc	180
agtctccatg	ttgcagaaga	ctttgatggc	atccaggttg	cagccttggg	tgggggtcaat	240
ccagtactct	ccactcttcc	agtcagagtg	gcacatcttg	aggtcacggc	aggtgcgggc	300
gggggttctt	cggtgcctct	ctgggctccg	gatgttctcg	atctgctggc	tcaggctctt	360
gaggggtggt	tccacctcga	ggtcacggtc	acgaaccaca	ttggcatcat	cagcccggta	420
gtagcggcca	ccatcgtgag	ccttctcttg	angtggctgg	ggcaggaact	gaagtcgaaa	480
ccagcgtctg	gaggaccagg	gggaccaana	ggtccaggaa	gggcccgggg	gggaccaaca	540
ggaccagcat	caccaagtgc	gacccgcgag	aacctgccc	gccgnccgct	cgaa	594

<210> 215
 <211> 590
 <212> DNA
 <213> Homo sapien

<220>

<221> misc_feature
 <222> (1)...(590)
 <223> n = A,T,C or G

<400> 215

tcgagcgnnc	gccccgggcag	gtctcgcggt	cgcactgggtg	atgctgggtcc	tgttggtccc	60
ccccgccctc	ctggacctcc	tggccccct	ggtcctccca	gcgctgggtt	cgacttcagc	120
ttcctgcccc	agccacctca	agagaaggct	cacgatgggtg	gccgctacta	ccgggctgat	180
gatgccaatg	tggttcgtga	ccgtgacctc	gaggtggaca	ccacctcaa	gagcctgagc	240
cagcagatcg	agaacatccg	gagcccagag	ggcagccgca	agaaccccg	ccgcacctgc	300
cgtgacctca	agatgtgcc	ctctgactgg	aagagtggag	agtactggat	tgaccccaac	360
caaggctgca	acctggatgc	catcaaagtc	ttctgcaaca	tggagactgg	tgagacctgc	420
gtgtacccca	ctcagcccag	tgtggcccag	aagaactggg	acatcagcaa	gaaccccaag	480
gacaagaggc	atgtctgggt	cggcgagagc	atgaccgatg	gattccagtt	cgagtatggc	540
ggccagggtc	cccacctgc	cgatgtggac	ctccggccgc	gaccaccctt		590

<210> 216
 <211> 801
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(801)
 <223> n = A,T,C or G

<400> 216

tngagcggcc	gccccgggcag	gntgnnaacg	ctggctcctgc	tggctcctct	ggcaaggctg	60
gtgaagatgg	tcaccttgga	aaacccggac	gacctgggtga	gagaggagtt	gttggaccac	120
aggggtgctcg	tggtttccct	ggaactcctg	gacttcctgg	cttcaaaggc	attaggggac	180
acaatggtct	ggatggattg	aagggacagc	ccggtgctcc	tgggtggaag	ggtgaacctg	240
gtgcccctgg	tgaatatgga	actccaggtc	aaacaggagc	ccgtgggctt	cctggtgaga	300
gaggaccgtg	ttggtgcccc	tggcccanac	ctcggcgcgc	accacgctaa	gcccgaattt	360
ccagcacact	gngggccgtt	actantggat	ccgagctcgg	taccaagctt	ggcgtaatca	420
tggctatagc	tgtttcctgn	gtgaaattgt	tatccgctca	caatttcaca	cancatacga	480
agccggaaa	cataaagtgt	aaagccttgg	ggtgctaattg	agtgaactaa	ctcncattaa	540
attgcgttgc	gctcactgcc	cgcttttcca	nnngggaaac	cntggcntng	ccngcttgc	600
ttaantgaaa	tccgccnacc	cccggggaaa	agncggtttg	cngtattggg	gcnccttttc	660
cctttcctcg	gnttacttga	nttantgggc	tttggncgnt	tcgggttgng	gcgancnggt	720
tcaacntcac	nccaaaggng	gnaanacggt	tttcccanaa	tccgggggnt	ancccaangn	780
aaaacatnng	ncnaangggc	t				801

<210> 217
 <211> 349
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(349)
 <223> n = A,T,C or G

<400> 217

agcgtgggtt	gcggccgagg	tctggggccag	gggcaccaac	acgtcctctc	tcaccaggaa	60
gccccagggc	tctgttttga	cctggagttc	cattttcacc	aggggcacca	ggttcaccct	120

tcacaccagg	agcaccgggc	tgtcccttca	atccatncag	accattgtgn	cccctaattgc	180
ctttgaagcc	aggaagtcca	ggagttccag	ggaaaccacc	gagcaccctg	tgggtccaaca	240
actcctctct	caccagggtcg	tccgggtttt	ccagggtgac	catcttcacc	agccttgcca	300
ggaggaccag	caggaccagc	gttaccaacc	tgcccgggcg	gccgctcga		349

<210> 218

<211> 372

<212> DNA

<213> Homo sapien

<400> 218

tcgagcggcc	gcccgggcag	gtccattttc	tccctgacgg	tcccacttct	ctccaatctt	60
gtagttcaca	ccattgtcat	ggcaccatct	agatgaatca	catctgaaat	gaccacttcc	120
aaagcctaag	cactggcaca	acagttttaa	gcctgattca	gacattcggt	cccactcatc	180
tccaacggca	taatgggaaa	ctgtgtaggg	gtcaaagcac	gagtcattccg	taggttggtt	240
caagccttcg	ttgacagagt	tgcccacggt	aacaacctct	tcccgaacct	tatgcctctg	300
ctggtctttc	agtgcctcca	ctatgatgtt	gtaggtggca	cctctggtga	ggacctcggc	360
cgcgaccacg	ct					372

<210> 219

<211> 374

<212> DNA

<213> Homo sapien

<400> 219

agcgtggtcg	cggccgaggt	cctcaccaga	ggtgccacct	acaacatcat	agtggaggga	60
ctgaaagacc	agcagaggca	taagggttcg	gaagagggtg	ttaccgtggg	caactctgtc	120
aacgaaggct	tgaaccaacc	tacggatgac	tcgtgctttg	acccttacac	agtttcccat	180
tatgccgttg	gagatgagtg	ggaacgaatg	tctgaatcag	gctttaaact	gttgtgccag	240
tgetttaggt	ttggaagtgg	tcatttcaag	atgtgattca	tctagatggt	gccatgacaa	300
tggtgtgaac	tacaagattg	gagagaagtg	ggaccgtcag	ggagaaaaatg	gacctgcccg	360
ggccggccgc	tcga					374

<210> 220

<211> 828

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(828)

<223> n = A,T,C or G

<400> 220

tcgagcgnn	gcccgggcag	gtccagtagt	gccttcggga	ctgggttcac	ccccagggtct	60
gcggcagttg	tcacagcgcc	agcccgcgtg	gcctccaaag	catgtgcagg	agcaaattggc	120
accgagatat	tccttctgcc	actgttctcc	tacgtgggtat	gtcttcccat	catcgttaaca	180
cgttgectca	tgagggtcac	acttgaattc	tccttttccg	ttcccaagac	atgtgcagct	240
catttggtctg	gctctatagt	ttggggaaa	ttgtgtgaaa	ctgtgccact	gacctttact	300
tcctccttct	ctactggagc	tttcgtacct	tccacttctg	ctgttggtaa	aatggtggat	360
cttctatcaa	tttcattgac	agtaccact	tctccaaac	atccaggga	atagtgtatt	420
caggcgatt	aggagaacca	aattatgggg	cagaaataag	gggcttttcc	acagggtttc	480
ctttggagga	agatttcagt	ggtgacttta	aaagaatact	caacagtgtc	ttcatcccca	540
tagcaaaaga	agaaacngta	aatgatggaa	ngcttctgga	gatgccnnca	tttaaggggac	600
ncccgaaact	tcaccatcta	caggacctac	ttcagtttac	annaagnac	atantctgac	660

tcanaaaagga	cccaagtagc	nccatggnc	gcacttttag	cctttcccct	ggggaaaann	720
ttacntttctt	aaancctngg	ccnngacccc	cttaagncca	aattntggaa	aanttcctn	780
cnnetggggg	gcngttcnac	atgcntttna	agggcccaat	tncccent		828

<210> 221
 <211> 476
 <212> DNA
 <213> Homo sapien

<400> 221						
tcgagcggcc	gcccgggcag	gtgtcggagt	ccagcacggg	aggcgtgggc	ttgtagttgt	60
tctccggctg	cccattgctc	tcccactcca	cggcgatgtc	gctgggatat	aagcctttga	120
ccaggcaggt	caggctgacc	tggtttcttg	tcattctctc	ccgggatggg	ggcaggggtg	180
acacctgtgg	ttctcggggc	tgcccttttg	ccttgagat	ggttttctcg	atgggggctg	240
ggagggtctt	gttgagacc	ttgcacttgt	actccttgcc	attcagccag	tcctgggtgca	300
ggacggtgag	gacgctgacc	acacggtagc	tgctgttgta	ctgctcctcc	cgcggctttg	360
tcttggcatt	atgcacctcc	acgccgtcca	cgtaccagtt	gaacttgacc	tcagggtctt	420
cgtgggtcac	gtccaccacc	acgcattgaa	cctcagacct	cggccgcgac	cacgct	476

<210> 222
 <211> 477
 <212> DNA
 <213> Homo sapien

<400> 222						
agcgtggctg	cggccgaggt	ctgaggttac	atgcgtgggtg	gtggacgtga	gccacgaaga	60
ccctgaggtc	aagttcaact	ggtacgtgga	cggcggtggag	gtgcataatg	ccaagacaaa	120
gccgcgggag	gagcagtaca	acagcacgta	ccgtgtgggc	agcgtcctca	ccgtcctgca	180
ccaggactgg	ctgaatggca	aggagtacaa	gtgcaaggct	tccaacaaag	ccctcccagc	240
ccccatcgag	aaaaccatct	ccaaagccaa	agggcaagcc	ccgagaacca	caggtgtaca	300
ccctgcccc	atcccgggag	gagatgacca	agaaccaggt	cagcctgacc	tgctgggtca	360
aaggcttcta	tcccagcgac	atcgccgtgg	agtgggagag	caatgggcag	ccgagaaca	420
actacaagac	cacgcctccc	gtgctggact	ccgacacctg	cccgggcggc	cgtctga	477

<210> 223
 <211> 361
 <212> DNA
 <213> Homo sapien

<400> 223						
tcgagcggcc	gcccgggcag	gttgaatggc	tcctcgctga	ccacccccgt	gctgggtggg	60
ggtacagagc	tccgatgggt	gaaaccattg	acatagagac	tgtccctgtc	caggggtgtg	120
gggccagct	cagtgatgcc	gtgggtcagc	tggtcagct	tccagtacag	ccgtctctg	180
tccagtccag	ggcttttggg	gtcaggacga	tggtgtcaga	cagcatccac	tctgggtggc	240
gccccatcct	tctcaggcct	gagcaaggct	agtctgcaac	cagagtacag	agagctgaca	300
ctggtgttct	tgaacaaggg	cataagcaga	ccctgaagga	cacctcggcc	gcgaccacgc	360
t						361

<210> 224
 <211> 361
 <212> DNA
 <213> Homo sapien

<400> 224						
agcgtgggtc	cggccgaggt	gtccttcagg	gtctgcttat	gcccttggtc	aagaacacca	60

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gtgtcagctc tctgtactct ggttgacagac tgaccttgct caggcctgag aaggatgggg 120
cagccaccag agtggatgct gtctgcaccc atcgctcctga ccccaaaagc cctggactgg 180
acagagagcg gctgtactgg aagctgagcc agctgaccca cggcatcact gagctggggc 240
cctacaccct ggacagggac agtctctatg tcaatggttt caccatcgg agctctgtac 300
ccaccaccag caccggggtg gtcagcgagg agccattcaa cctgcccggg cggccgctcg 360
a 361

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<210> 225
 <211> 766
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(766)
 <223> n = A,T,C or G

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<400> 225
agcgtggctc cggccgaggt cctgtcagag tggcactggt agaagttcca ggaaccctga 60
actgtaaggg ttcttcatca gtgccaacag gatgacatga aatgatgtac tcagaagtgt 120
cctggaatgg ggcccatgag atggttgtct gagagagagc ttcttgrcct acattcggcg 180
ggtatggctt tggcctatgc cttatggggg tggccgttgt gggcgggtgt gtccgcctaa 240
aaccatgttc ctcaaagatc atttggttgc caacactggg ttgctgacca gaagtgccag 300
gaagctgaat accatttcca gtgtcatacc cagggtgggt gacgaaaggg gtcttttgaa 360
ctgtggaagg aacatccaag atctctggtc catgaagatt ggggtgtgga agggttacca 420
gttggggaag ctgctctgtc tttttccttc caatcagggg ctgctcttc tgattattct 480
tcagggaat gacataaatt gtatattcgg tcccggttcc aggccagtaa tagtagcctc 540
tgtgacacca gggcggggcc gagggaccct tctnttgaa gagaccagct tctcatactt 600
gatgatgagn ccggtaatcc tggcacgtgg nggttgcagt atnccaccaa ggaaatnggn 660
ggggngggac ctgcccggcg gccgttcnaa agcccaattc cacacacttg gnggccgtac 720
tatggatccc actcngtcca acttgngnga atatggcata actttt 766

```

<210> 226
 <211> 364
 <212> DNA
 <213> Homo sapien

```

<400> 226
tcgagcggcc gcccgggcag gtccttgacc ttttcagcaa gtgggaaggt gtaatccgtc 60
tccacagaca aggccaggac tcgtttgtac ccgttgatga tagaatgggg tactgatgca 120
acagtgggt agccaatctg cagacagaca ctggcaacat tgcggacacc ctccaggaag 180
cgagaatgca gagtttcctc tgtgatatca agcaattcag ggttgtagat gctgccattg 240
tcgaacacct gctggatgac cagcccaaag gagaaggggg agatgttgag catgttcagc 300
agcgtggctt cgctggctcc cactttgtct ccagtcctga tcagacctcg gccgcgacca 360
cgct 364

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<210> 227
 <211> 275
 <212> DNA
 <213> Homo sapien

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<400> 227
agcgtggctc cggccgaggt ctgtcctaca gtcctcagga ctctactccc tcagcagcgt 60
ggtgaccgtg cctccagca acttcggcac ccagacctac acctgcaacg tagatcacia 120
gccagcaac accaaggtgg acaagagagt tgagcccaaa tcttgtgaca aaactcacac 180

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atgcccaccg tgcccagcac ctgaactcct ggggggaccg tcagtcttcc tcttcccccg 240
catccccctt ccaaactgc ccgggcggcc gctcg 275

<210> 228
<211> 275
<212> DNA
<213> Homo sapien

<400> 228
cgagcggccg cccgggcagg ttggaaggg ggatgcgggg gaagaggaag actgacggtc 60
ccccaggag ttcagggtgct gggcacgggt ggcatgtgtg agttttgtca caagatttgg 120
gctcaactct cttgtccacc ttggtgttgc tgggcttgtg atctacgttg cagggttagg. 180
tctgggtgcc gaagttgctg gagggcacgg tcaccacgct gctgaggag tagagtctg 240
aggactgtag gacagacctc ggccgcgacc acgct 275

<210> 229
<211> 40
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(40)
<223> n = A,T,C or G

<400> 229
nggnnggtcc ggnngncag gaccactcnt cttegaaata 40

<210> 230
<211> 208
<212> DNA
<213> Homo sapien

<400> 230
agcgtggtcg cggccgaggt cctcacttgc ctctgcaaa gcaccgatag ctgcgctctg 60
gaagcgcaga tctgttttaa agtcctgagc aatttctcgc accagacgct ggaagggaag 120
tttgcaatc agaagttcag tggacttctg ataacgtcta atttcacgga gcgccacagt 180
accaggacct gcccgggcgg ccgctcga 208

<210> 231
<211> 208
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(208)
<223> n = A,T,C or G

<400> 231
tcgagcggcc gcccgggcag gtcttggtac tgnngcgcgc cgtgaaatta gacgttatca 60
gaagtccact gaacttctga ttcgcaaact tcccttccag cgtctggtgc gagaaattgc 120
tcaggacttt aaaacagatc tgcgcttcca gagcgcagct atcgggtgctt tgcaggaggc 180
aagtgaggac ctcgccgcg accacgct 208

<210> 232
 <211> 332
 <212> DNA
 <213> Homo sapien

<400> 232
 tcgagcggcc gcccgggcag gtccacatcg gcagggctcg agccctggcc gccatactcg 60
 aactggaatc catcggtcat gctctcgccg aaccagacat gcctcttgct cttgggggttc 120
 ttgctgatgt accagttctt ctggggccaca ctgggctgag tggggtacac gcaggtctca 180
 ccagtctcca tgttgacagaa gactttgatg gcatccaggt tgcagccttg gttgggggtca 240
 atccagtact ctccactctt ccagtcagag tggcacatct tgaggtcacg gcaggtgcgg 300
 gcgggggttct tgacctcggc cgcgaccacg ct 332

<210> 233
 <211> 415
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(415)
 <223> n = A,T,C or G

<400> 233
 gtgggnttga acccntttna nctccgcttg gtaccgagct cggatccact agtaacggcc 60
 gccagtgtgc tggaattcgg cttagcgtgg tcgcggccga ggtcaagaac cccgcccgcga 120
 cctgccgtga cctcaagatg tgccactctg actggaagag tggagagtac tggattgacc 180
 ccaaccaagg ctgcaacctg gatgccatca aagtcttctg caacatggag actgggtgaga 240
 cctgcgtgta cccactcag ccagtggtgg ccagaagaa ctggtacatc agcaagaacc 300
 ccaaggacaa gaggcattgc tggttcggcg agagcatgac cgatggattc cagttcgagt 360
 atggcgccca gggctccgac cctgccgatg tggacctgcc cgggcggccg ctcca 415

<210> 234
 <211> 776
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(776)
 <223> n = A,T,C or G

<400> 234
 agcgtggctg cggccgagggt ctgggatgct cctgctgtca cagtgaagata ttacaggatc 60
 acttacggag aaacaggagg aaatagccct gtccaggagt tcaactgtgc tgggagcaag 120
 tctacagcta ccatcagcgg ccttaaacct ggagttgatt ataccatcac tgtgtatgct 180
 gtcactggcc gtggagacag ccccgcaagc agcaagccaa tttccattaa ttaccgaaca 240
 gaaattgaca aaccatccca gatgcaagtg accgatgttc aggacaacag cattagtgtc 300
 aagtggctgc cttcaagttc cctgttact ggttacagag taaccaccac tccccaaaat 360
 ggaccaggac caacaaaaac taaaactgca ggtccagatc aaacagaaat gactattgaa 420
 ggcttgacgc ccacagtggg gtatgtggtt aagtgtctat gctcagaatc caagcggaga 480
 gaagtcagcc tctggttcag actgnaagta accaaccattg atcgccataa ggactggcat 540
 tcaactgatgn ggatgccgat tccatcaaaa ttgnttggga aaaccacag gggcaagttt 600
 ncangtcnag gnggacctac tcgagccctg aggatggaat ccttgactnt tccttnncc 660
 gatggggaaa aaaaaccttn aaaacttgaa ggacctgccc gggcgccgt ncaaaacca 720

attccacccc cttgggggcg ttctatgggn ccactcggga ccaaacttgg ggtaan

776

<210> 235

<211> 805

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(805)

<223> n = A,T,C or G

<400> 235

tcgagcggcc	gcccgggag	gtccttgag	ctctgcagt	tcttcttcac	catcagggtgc	60
agggaaatagc	tcatggattc	catcctcagg	gctcgagtag	gtcacccctgt	acctggaaac	120
ttgcccctgt	gggctttccc	aagcaatttt	gatggaatcg	gcatccacat	cagtgaatgc	180
cagtccttta	gggcatcaa	tggttggttac	tgcagtctga	accagaggct	gactctctcc	240
gcttgattc	tgagcataga	cactaaccac	atactccact	gtgggctgca	agccttcaat	300
agtcatttct	gtttgatctg	gacctgcagt	tttagttttt	gttggtcctg	gtccattttt	360
gggagtggg	gttactctgt	aaccagtaac	aggggaactt	gaaggcagcc	acttgacact	420
aatgctgttg	tcctgaacat	cggtcacttg	catctgggat	ggtttgtcaa	tttctgttcg	480
gtaattaatg	gaaattggct	tgctgcttgc	ggggcttgtc	tccacggcca	gtgacagcat	540
acacagtgat	ggtataatca	actccagggt	taagccgctg	atggtagctg	aaactttgct	600
ccaggcacaa	gtgaactcct	gacagggcta	tttcctnctg	ttctccgtaa	gtgatcctgt	660
aatatctcac	tgggacagca	ggangcattc	caaaacttcg	ggcgngaccc	cctaagccga	720
attntgcaat	atncatcaca	ctggcgggag	ctcgancatt	cattaaaagg	cccaatcncc	780
cctataggga	gtntantaca	attng				805

<210> 236

<211> 262

<212> DNA

<213> Homo sapien

<400> 236

tcgagcggcc	gcccgggag	gtcacttttg	gtttttgggc	atggttcggtt	ggtcaaagat	60
aaaaactaag	tttgagagat	gaatgcaaag	gaaaaaaata	ttttccaaag	tccatgtgaa	120
attgtctccc	atttttttgg	cttttgaggg	ggttcagttt	gggttgcttg	tctgtttccg	180
ggttgggggg	aaagttaggt	gggtgggagg	gagccaggtt	gggatggagg	gagtttacag	240
gaagcagaca	gggccaacgt	cg				262

<210> 237

<211> 372

<212> DNA

<213> Homo sapien

<400> 237

agcgtgggtcg	cggccgaggt	cctcaccaga	ggtgccacct	acaacatcat	agtggaggga	60
ctgaaagacc	agcagaggca	taaggttcgg	gaagagggtg	ttaccgtggg	caactctgtc	120
aacgaaggct	tgaaccaacc	tacggatgac	tcgtgctttg	accctacac	agtttcccat	180
tatgccgttg	gagatgagtg	ggaacgaatg	tctgaatcag	gctttaaact	gttggtccag	240
tgcttaggct	ttggaagtgg	tcatttcaga	tgtgattcat	ctagatgggtg	ccatgacaat	300
ggtgtgaact	acaagattgg	agagaagtgg	gaccgtcagg	gagaaaatgg	acctgccggg	360
gcggccgctc	ga					372

<210> 238

<211> 372
 <212> DNA
 <213> Homo sapien

<400> 238
 tcgagcggcc gcccgggcag gtccattttc tccctgaagg tcccacttct ctccaatctt 60
 gtagttcaca ccattgtcat ggcaccatct agatgaatca catctgaaat gaccacttcc 120
 aaagcctaag cactggcaca acagttttaa gcctgattca gacattcgtt cccactcatc 180
 tccaacggca taatgggaaa ctgtgtaggg gtcaaagcac gagtcacccg taggttggtt 240
 caagccttcg ttgacagagt tgcccacggg aacaacctct tcccgaacct tatgcctctg 300
 ctggtctttc agtgccctca ctatgatgtt gtaggtggca cctctggtga ggacctcggc 360
 cgcgaccacg ct 372

<210> 239
 <211> 720
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(720)
 <223> n = A,T,C or G

<400> 239
 tcgagcggcc gcccgggcag gtccaccata agtccctgata caaccacgga tgagctgtca 60
 ggagcaaggt tgatttcttt cattgggtccg gtcttctcct tgggggtcac ccgcactcga 120
 tatccagtga gctgaacatt ggggtggtgc cactgggcgc tcaggcttgt ggggtgtgacc 180
 tgagtgaact tcaggtcagt tgggtgcagga atagtgggta ctgcagctg aaccagaggc 240
 tgactctctc cgcttggtatt ctgagcatag acactaacca catactccac tgtgggctgc 300
 aagccttcaa tagtcatttc tgtttgatct ggacctgcag ttttagtttt tgttggtcct 360
 ggtccatttt tgggagtggg ggttactctg taaccagtaa caggggaact tgaaggcagc 420
 cacttgacac taatgctgtt gtcctgaaca tcggtcactt gcactctggga tggtttgnca 480
 atttctgttc ggtaattaat ggaaattggc ttgctgcttg cggggctgtc tccacggcca 540
 gtgacagcat acacagngat ggnatnatca actccaagtt taaggccctg atggtaactt 600
 taaacttgct cccagccagn gaacttccgg acaggggtatt tcttctggtt ttccgaaagn 660
 gancctggaa tnntctcctt ggancagaag gancntccaa aacttggggc ggaacccctt 720

<210> 240
 <211> 691
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(691)
 <223> n = A,T,C or G

<400> 240
 agcgtggctg cggccgaggt cctgtcagag tggcactggg agaagttcca ggaaccctga 60
 actgtaaggg ttcttcatca gtgccaacag gatgacatga aatgatgtac tcagaagtgt 120
 cctggaatgg ggcccatgag atggttgtct gagagagagc ttcttgtcct acattcggcg 180
 ggtatggctt tggcctatgc cttatggggg tggccgttgt gggcggtgtg gtccgcctaa 240
 aacctgttct ctcaaagatc atttgttgcc caacactggg ttgctgacca gaagtgcacg 300
 gaagctgaat accatttcca gtgtcatacc caggggtggg gacgaaaggg gtcttttgaa 360
 ctgtggaagg aacatccaag atctctggtc catgaagatt ggggtgtgga agggttacca 420

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gttggggaag ctggtctgtc tttttccttc caatcagggg ctcgtctctc tgattattct 480
tcagggcaat gacataaatt gtatattcgg ttcccgggtc caggccagta atagtagcct 540
cttgtgacac caggcggggc ccanggacca cttctctggg angagacca gcttctcata 600
cttgatgatg taacccggta atcctgcacg tggcggtgn catgatacca ncaaggaatt 660
gggtgngngg gacctgcccc gcgccctcn a 691

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<210> 241

<211> 808

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(808)

<223> n = A,T,C or G

<400> 241

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agcgtggtcg cggccgaggt ctgggatgct cctgctgtca cagtgagata ttacaggatc 60
acttacggag aaacaggagg aaatagccct gtccaggagt tcaactgtgcc tgggagcaag 120
tctacagcta ccatacagcg ccttaaacct ggagttgatt ataccatcac tgtgtatgct 180
gtcactggcc gtggagacag ccccgcaagc agcaagccaa tttccattaa ttaccgaaca 240
gaaattgaca aaccatccca gatgcaagtg accgatgttc aggacaacag cattagtgtc 300
aagtggctgc cttcaagttc cctgttact ggttacagag taaccaccac tcccaaaaat 360
ggaccaggac caacaaaaac taaaactgca ggtccagatc aaacagaaat gactattgaa 420
ggcttgcagc ccacagtgga gtatgtggtt agtgtctatg ctcagaatcc aagcggagag 480
agtcagcctc tgggttcagac tgcagtaacc actattcctg caccaactga cctgaagttc 540
actcaggatc caccacaag cctgagccgc cagtggacac caccatgt tcaactactg 600
gatatcgagt gcgggtgacc cccaaggaga agacccggac ccatgaaaga aatcaacctt 660
gtccttgaca gctcatccgn ggggtgatca ggacttatgg gggactgcc cggcnggccg 720
ntcgaaancg aattntgaaa tttccttcnc actgggnggc gnttcgagct tnctntana 780
nggcccaatt cncctntagn gggtegtc 808

```

<210> 242

<211> 26

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(26)

<223> n = A,T,C or G

<400> 242

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agcgtggtcg cggccgaggt cnagga 26

```

<210> 243

<211> 697

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(697)

<223> n = A,T,C or G

<400> 243

tcgagcgccc	gcccgggcag	gtccaccaca	cccaattcct	tgctggtatc	atggcagccg	60
ccacgtgcc	ggattaccgg	ctacatcatc	aagtatgaga	agcctgggtc	tcctcccaga	120
gaagtgggtc	ctcgcccccg	ccctgggtgc	acagaggcta	ctattactgg	cctggaaccg	180
ggaaccgaat	atacaattta	tgtcattgcc	ctgaagaata	atcagaagag	cgagcccctg	240
attggaagga	aaaagacaga	cgagcttccc	caactggtaa	cccttcacac	ccccaatctt	300
catggaccag	agatcttggg	tgttccttcc	acagttcaaa	agaccccttt	cgtaaccac	360
cctgggtatg	acactggaaa	tggatttcag	cttcctggca	cttctggtca	gcaaccacgt	420
gttgggcaac	aaatgatctt	tgaggaacat	ggtttttaggc	ggaccacacc	gccacaacg	480
ggcaccacca	taaggnatag	gccaagacca	taccccgccg	aatgtaggac	aagaagctct	540
ntctcaacaa	ccatctcatg	ggccccattc	caggacactt	ctgagtacat	catttcatgt	600
catcctggtg	ggcacttgat	gaanaacct	tacagttcag	ggttcctgga	acttctacca	660
gngccacttc	tgacagganc	ttgggcgnga	ccaccct			697

<210> 244

<211> 373

<212> DNA

<213> Homo sapien

<400> 244

agcgtgggtc	cgcccgaggt	ccattttctc	cctgacggtc	ccacttctct	ccaatcttgt	60
agttcacacc	attgtcatgg	caccatctag	atgaatcaca	tctgaaatga	ccacttccaa	120
agcctaagca	ctggcacaa	agtttaaagc	ctgattcaga	cattcggttc	cactcatctc	180
caacggcata	atgggaaact	gtgtaggggt	caaagcacga	gtcatccgta	ggttggttca	240
agccttcgtt	gacagagttg	cccacggtaa	caacctcttc	ccgaacctta	tgctctgtct	300
ggtctttcag	tgctccact	atgatgttgt	agggtgcacc	tctggtgagg	acctgcccgg	360
gcggcccgtc	cga					373

<210> 245

<211> 307

<212> DNA

<213> Homo sapien

<400> 245

agcgtgggtc	cgcccgaggt	gtgccccaga	ccaggaattc	ggcttcgacg	ttggccctgt	60
ctgcttctct	taaactccct	ccatcccaac	ctggctccct	cccacccaac	caactttccc	120
cccaaccggg	aaacagacaa	gcaacccaaa	ctgaaccccc	tcaaaaagcca	aaaaaatggg	180
agacaatttc	acatggactt	tggaataat	ttttttcctt	tgcatcctac	tctcaaactt	240
agtttttatc	tttgaccaac	cgaacatgac	caaaaaccaa	aagtgacctg	cccgggcggc	300
cgctcga						307

<210> 246

<211> 372

<212> DNA

<213> Homo sapien

<400> 246

tcgagcgccc	gcccgggcag	gtcctcacca	gaggtgccac	ctacaacatc	atagtggagg	60
cactgaaaga	ccagcagagg	cataagggtc	gggaagaggt	tgttaccgtg	ggcaactctg	120
tcaacgaagg	cttgaaccaa	cctacggatg	actcgtgctt	tgacccctac	acagtttccc	180
attatgccgt	tggagatgag	tgggaacgaa	tgtctgaatc	aggctttaaa	ctggtgtgcc	240
agtgccttag	ctttggaagt	ggtcatttca	gatgtgattc	atctagatgg	tgccatgaca	300
atggtgtgaa	ctacaagatt	ggagagaagt	gggaccgtca	gggagaaaat	ggacctcggc	360
cgcgaccacg	ct					372

<210> 247
 <211> 348
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(348)
 <223> n = A,T,C or G

<400> 247
 tcgagcggcc gcccgggcag gtaccgggggt ggtcagcgag gagccattca cactgaactt 60
 caccatcaac aacctgcggt atgaggagaa catgcagcac cctggctcca ggaagttcaa 120
 caccacggag agggtccttc agggcctgct caggtccttg ttcaagagca ccagtgttgg 180
 ccctctgtac tctggctgca gactgacttt gctcagacct gagaaacatg gggcagccac 240
 tggagtggac gccatctgca ccctccgcct tgatcccact ggtncctggac tggacanana 300
 gcggctatac ttgggagctg anccnaacct ttggcgngga cncnctt 348

<210> 248
 <211> 304
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(304)
 <223> n = A,T,C or G

<400> 248
 gaggactggc tcagctccca gtatagccgc tctctgtcca gtccaggacc agtgggatca 60
 aggcggaggg tgcagatggc gtccactcca gtggctgccc catgtttctc aagtctgagc 120
 aaagncagtc tgcagccaga gtacagaggg ccaacactgg tgctcttgaa caggggacctg 180
 agcaggccct gaaggaccct ctccgtggtg ttgaacttcc tggagccagg gtgctgcatg 240
 ttctcctcat accgcaggtt gttgatggtg aagttcagtg tgaatggctc ctgcgtgacc 300
 accc 304

<210> 249
 <211> 400
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(400)
 <223> n = A,T,C or G

<400> 249
 agcgtggtcg cggccgaggt ccaccacacc caattccttg ctggtatcat ggcagccgcc 60
 acgtgccagg attaccggt acatcatcaa gtatgagaag cctgggtctc ctcccagaga 120
 agtggtcctt cgccccgcc ctggtgtcac agaggctact attactggcc tggaaaccggg 180
 aaccgaatat acaatttatg tcattgccct gaagaataat cagaagagcg agccccctgat 240
 tgggaaggaaa aagacagacg agcttcccca actggtaacc cttccacacc ccaatcttca 300
 tggaccanan ancttgatn gtcctttcac nggttnaaaa aacccttttc gccccccac 360
 cttggggatt aaccttgga aanggggatt tnacncttc 400

<210> 250
<211> 400
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(400)
<223> n = A,T,C or G

<400> 250
tcgagcggcc gcccgggcag gtcctgtcag agtggcactg gtagaagttc caggaaccct 60
gaactgtaag gggtcttcat cagtgccaac aggatgacat gaaatgatgt actcagaagt 120
gtcctggaat ggggcccatg agatggttgt ctgagagaga gcttcttgtc ctacattcgg 180
cgggtatggt cttggcctat gccttatggg ggtggccgtt gtgggcggtg tgggccgcct 240
aaaaccatgt tcctcaaaga tcatttggtg cccaacactg ggttgctgac cagaagtgcc 300
aggaagctga ataccatttc cagtgtcata ccagggngg gtgaccaaag ggggtcnttt 360
ngacctggng aaaggaacca tccaaaanct ctgncccatg 400

<210> 251
<211> 514
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(514)
<223> n = A,T,C or G

<400> 251
agcgtggncg cggccgaggt ctgaggatgt aaactcttcc caggggaagg ctgaagtgct 60
gaccatggtg ctactgggtc cttctgagtc agatatgtga ctgatgngaa ctgaagtagg 120
tactgtagat ggtgaagtct ggggtgtccct aaatgctgca tctccagagc cttccatcat 180
taccgtttct tcttttgcta tgggatgaga cactgttgag tattctctaa agtcaccact 240
gaaatcttcc tccaaaggaa aacctgtgga aaagcccctt atttctgccc cataatttgg 300
ttctccta at cncctctgaaa tcactatttc cctggaangt ttgggaaaaa nngggcnacc 360
tgncantgga aantggatan aaagatccca ccattttacc caacnagcag aaagtgggaa 420
nggtaccgaa aagctccaag taanaaaaag gagggaagta aaggtcaagt gggcaccagt 480
ttcaaacaaa actttcccca aactatanaa ccca 514

<210> 252
<211> 501
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(501)
<223> n = A,T,C or G

<400> 252
aagcggccgc ccggcgaggn ncagnagtgc cttcgggact gggntcaccc ccaggtctgc 60
ggcagttgtc acagcgccag ccccgctggc ctccaaagca tgtgcaggag caaatggcac 120
cgagatatc cttctgccac tgttctccta cgtggtatgt cttcccatca tcgtaacacg 180
ttgcctcatg agggtcacac ttgaattctc cttttccgtt cccaagacat gtgcagctca 240

tttggctggc tctatagttt ggggaaagt tgttgaaact gtgccactga cctttacttc	300
ctccttctct actggagctt tccgtacct ccacttctgc tgntggnaaa aagggnggaa	360
cntcttatca atttcattgg acagtanccc nctttctncc caaaacatnc aagggaaaat	420
attgattncn agagcggatt aaggaacaac ccnaattatg ggggccagaa ataaaggggg	480
cttttccaca ggtnttttcc t	501

<210> 253

<211> 226

<212> DNA

<213> Homo sapien

<400> 253

tcgagcggcc gcccgggcag gtctgcaggc tattgtaagt gttctgagca catatgagat	60
aacctgggccc aagctatgat gttcgatacg ttaggtgtat taaatgcact tttgactgcc	120
atctcagtgg atgacagcct tctcactgac agcagagatc ttcttcaactg tgccagtggg	180
caggagaaaag agcatgctgc gactggacct cggccgcgac cacgct	226

<210> 254

<211> 226

<212> DNA

<213> Homo sapien

<400> 254

agcgtggctg cggccgaggt ccagtcgcag catgctcttt ctctgcccac ctggcacagt	60
gaggaagatc tctgctgtca gtgagaaggc tgtcatccac tgagatggca gtcaaaagtg	120
catttaatac acctaacgta tcgaacatca tagcttggcc caggttatct catatgtgct	180
cagaacactt acaatagcct gcagacctgc ccgggcggcc gctcga	226

<210> 255

<211> 427

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(427)

<223> n = A,T,C or G

<400> 255

cgagcggccg cccgggcagg tccagactcc aatccagaga accaccaagc cagatgtcag	60
aagctacacc atcacagggt tacaaccagg cactgactac aagatctacc tgtacacctt	120
gaatgacaat gctcggagct cccctgtggt catcgacgcc tccactgcca ttgatgcacc	180
atccaacctg cgtttctctg ccaccacacc caattccttg ctggtatcat ggcagccgcc	240
acgtgccagg attaccggct acatcatcaa gtatgagaag cctgggtctc ctcccagaga	300
agtgtccct cggccccgcc ctggtgnac agaagctact attactggcc tggaaccggg	360
aaccgaatat acaatttatg tcattgccct gaagaataat canaagagcg agcccctgat	420
tggaagg	427

<210> 256

<211> 535

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(535)

<223> n = A,T,C or G

<400> 256

agcgtgggtcg	cggccgaggt	cctgtcagag	tggcactggg	agaagttcca	ggaaccctga	60
actgtaaggg	ttcttcatca	gtgccaacag	gatgacatga	aatgatgtac	tcagaagtgt	120
cctggaatgg	ggcccatgag	atggttgtct	gagagagagc	ttcttgtcct	gtctttttcc	180
ttccaatcag	gggctcgctc	ttctgattat	tcttcagggc	aatgacataa	attgtatatt	240
cgggtccccg	ttccaggcca	gtaatagtag	cctctgtgac	accaggggcg	ggccgaggga	300
ccacttctct	gggaggagac	ccaggcttct	catacttgat	gatgtanccg	gtaatcctgg	360
caccgtggcg	gctgccatga	taccagcaag	gaattgggtg	tgggtggcaa	gaaacgcagg	420
ttggatgggtg	catcaatggc	agtggaggcg	tcgatnacca	caggggagct	ccgancattg	480
tcattcaagg	tggacaggta	gaatcttgta	atcagggtgcc	tggtttgtaa	acctg	535

<210> 257

<211> 544

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(544)

<223> n = A,T,C or G

<400> 257

tcgagcggcc	gcccgggcag	gtttcgtgac	cgtgacctcg	aggtggacac	caccctcaag	60
agcctgagcc	agcagatcga	gaacatcccg	agcccagagg	gcagccgcaa	gaaccccgcc	120
cgcacctgcc	gtgacctcaa	gatgtgccac	tctgactgga	agagtggaga	gtactggatt	180
gaccccaacc	aaggctgcaa	cctggatgcc	atcaaagtct	tctgcaacat	ggagactggg	240
gagacctgcg	tgtaccccac	tcagcccagc	gtggcccaga	agaactggta	catcagcaag	300
aaccccaagg	acaagaagca	tgtctgggtc	ggcgaaagca	tgaccgatgg	attccagttc	360
gagtatggcg	gccagggtct	cgacctgcc	gatgtggacc	tcggccgcga	ccacgctaag	420
cccgaattcc	agcacactgg	cggccgttac	tagtgggatc	cgagcttcgg	taccaagctt	480
ggcgtaatca	tgggncatag	ctgtttcctg	ngtgaaaatg	gtattccgct	tcacaatttc	540
ccac						544

<210> 258

<211> 418

<212> DNA

<213> Homo sapien

<400> 258

agcgtgggtcg	cggccgaggt	ccacatcggc	agggtcggag	ccctggccgc	catactcgaa	60
ctggaatcca	tcgggtcatgc	tctcgccgaa	ccagacatgc	ctcttgtcct	tggggttctt	120
gctgatgtac	cagttcttct	gggccacact	gggctgagtg	gggtacacgc	aggtctcacc	180
agtctccatg	ttgcagaaga	ctttgatggc	atccaggttg	cagccttggt	tgggggtcaat	240
ccagtactct	ccactcttcc	agtcagagtg	gcacatcttg	aggtcacggc	aggtgcgggc	300
ggggttcttg	cggtgcctct	ctgggctccg	gatgttctcg	atctgctggc	tcaagctctt	360
gaagggtggg	gtccacctcg	aggtcacggg	cacgaaacct	gcccgggcgg	ccgctcga	418

<210> 259

<211> 377

<212> DNA

<213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(377)
 <223> n = A,T,C or G

<400> 259
 agcgtgggtcg cggccgaggt caagaacccc gccgcacact gccgtgacct caagatgtgc 60
 cactctgact ggaagagtgg agagtactgg attgacccca accaaggctg caacctggat 120
 gccatcaaag tcttctgcaa catggagact ggtgagacct gcgtgtacct cactcagccc 180
 agtgtggccc agaagaactg gtacatcagc aagaacccca aggacaagag gcatgtcttg 240
 ttcggcgaga gcatgaccga tggattccag ttcgagtatg gcggccaggg ctccgaccct 300
 gccgatgtgg acctgcccgn gccggnccgc tcgaaaagcc cnaatttcca gncacacttg 360
 gccggccggt actactg 377

<210> 260
 <211> 332
 <212> DNA
 <213> Homo sapien

<400> 260
 tcgagcggcc gcccgggcag gtccacatcg gcagggtcgg agccctggcc gccatactcg 60
 aactggaatc catcggtcat gctctcgccg aaccagacat gcctcttgct cttgggggttc 120
 ttgctgatgt accagttctt ctgggccaca ctgggctgag tggggtacac gcaggctctca 180
 ccagtctcca tgttgacaga gactttgatg gcatccaggt tgcagccttg gttgggggtca 240
 atccagtact ctccactctt ccagtcagag tggcacatct tgaggtcacg gcagggtcgg 300
 gcgggggttct tgacctcggc cgcgaccacg ct 332

<210> 261
 <211> 94
 <212> DNA
 <213> Homo sapien

<400> 261
 cgagcggccg cccgggcagg tccccccct tttttttttt tttttttttt tttttttttt 60
 tttttttttt tttttttttt tttttttttt tttt 94

<210> 262
 <211> 650
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(650)
 <223> n = A,T,C or G

<400> 262
 agcgtgggtcg cggccgaggt ctggcattcc ttcgacttct ctccagccga gtttcccaga 60
 acatcacata tcaactgaaa aatagcattg catacatgga tcaggccagt ggaaatgtaa 120
 agaaggccct gaagctgatg ggggtcaaatg aagggtgaatt caaggctgaa ggaaatagca 180
 aattcaccta cacagttctg gaggatggtt gcacgaaaca cactggggaa tggagcaaaa 240
 cagtctttga atatcgaaca cgcaaggctg tgagactacc tattgtagat attgcaccct 300
 atgacattgg tggctctgat caagaatttg gtgtggacgt tggccctggt tgctttttat 360
 aaaccaaact ctatctgaaa tcccaacaaa aaaaatttaa ctccatattg gntcctcttg 420
 ttctaattctt ggcaaccagt gcaagtgacc gacaaaattc cagttattta tttccaaaat 480

gtttggaac agtataattt gacaaagaaa aaaggatact tctctttttt tggctgggtcc 540
accaaataca attcaaaagg ctttttggtt ttattttttt anccaattcc aatttcaaaa 600
tgtctcaatg gngcttataa taaaataaac tttcaccctt nttttntgat 650

<210> 263
<211> 573
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(573)
<223> n = A,T,C or G

<400> 263
agcgtgggtcg cggccgaggt ctgggatgct cctgctgtca cagtgaagata ttacaggatc 60
acttacggag aaacaggagg aaatagccct gtccaggagt tcactgtgcc tgggagcaag 120
tctacagcta ccatcagcgg ccttaaacct ggagttgatt ataccatcac tgtgtatgct 180
gtcactggcc gtggagacag ccccgaagc agcaagccaa tttccattaa ttaccgaaca 240
gaaattgaca aaccatccca gatgcaagt accgatgttc aggacaacag cattagtgtc 300
aagtgggtgc cttcaagttc ccctgttact gggtacagaa gtaaccacca ctcccaaaaa 360
tggaccagga ccaacaaaaa ctaaaactgc aggtccagat caaacagaaa atggactatt 420
gaaggcttgc agcccacagt ggaagtatgt ggntaggngt ctatgctcag aatcccaagc 480
cggagaaagt cagccttctg gtttagactg cagtaaccaa cattgatcgc cctaaaggac 540
tggncattca cttggatggt ggatgtccaa ttc 573

<210> 264
<211> 550
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(550)
<223> n = A,T,C or G

<400> 264
tcgagcggcc gcccgggcag gtccttgcag ctctgcagng tcttcttcac catcaggtgc 60
agggaaatagc tcatggattc catcctcagg gctcgagtag gtcaccctgt acctggaaac 120
ttgcccctgt gggctttccc aagcaatttt gatggaatcg acatccacat cagnaatgc 180
cagtccttta gggcgatcaa tggttggttac tgcagtctga accagaggct gactctctcc 240
gcttggattc tgagcataga cactaaccac atactccact gtgggctgca agccttcaat 300
agtcatttct gtttgatctg gacctgcagt tttaagtttt tgggtggctc gnccatttt 360
tgggaagtgg ggggttactc tgtaaccagt aacaggggaa cttgaaggca gccacttgac 420
actaatgctg ttgtcctgaa catcggtcac ttgcatctgg ggatggtttt gacaatttct 480
ggttcggcaa attaattgaa attggcttgc tgcttggcgg ggctgnctcc acggggccagt 540
gacagcatac 550

<210> 265
<211> 596
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature

<222> (1)...(596)

<223> n = A,T,C or G

<400> 265

tcgagcggcc gcccgggcag gtccttgacag ctctgcagtg tcttcttcac catcaggtgc	60
agggaaatagc tcatggattc catcctcagg gctcgagtag gtcaccctgt acctggaaac	120
ttgcccctgt gggctttccc aagcaatttt gatggaatcg acatccacat cagtgaatgc	180
cagtccttta gggcgatcaa tgttggttac tgcagtcga accagaggct gactctctcc	240
gcttgattc tgagcataga cactaaccac atactccact gtgggctgca agccttcaat	300
agtcatttct gtttgatctg gacctgcagt ttttaagttt tgttggnctt gnnccatttt	360
tggggaagggt gtggttactc ttgtaaccag taacagggga acttgaagca gccacttgac	420
actaatgctg gtggcctgaa catcggtcac ttgcatctgg gatgggttgg tcaatttctg	480
ttcgtaatt aatgggaaat tggcttactg gcttgcgggg gctgtctcca cggncagtga	540
caagcataca caggngatgg gtataatcaa ctccaggttt aaggccnctg atggta	596

<210> 266

<211> 506

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(506)

<223> n = A,T,C or G

<400> 266

agcgtgggtcg cggccgaggt ctgggatgct cctgctgtca cagtgaagata ttacaggatc	60
acttacggag aaacaggagg aaatagccct gtccaggagt tcaactgtgcc tgggagcaag	120
tctacagcta ccatacagcg ccttaaacct ggagttgatt ataccatcac tgtgtatgct	180
gtcactggcc gtggagacag ccccgcaagc agtaagccaa tttccattaa ttaccgaaca	240
gaaattgaca aaccatccca gatgcaagtg accgatgttc aggacaacag cattagtgtc	300
aagtggctgc cttcaagttc ccctgttact ggttacagag taaccaccac tcccaaaaat	360
gggaccagga ccaacaaaaa actaaaactg canggctccag atcaaacaga aatgactatt	420
gaaggcttgc agccacaggt ggagtatgtg ggttagtgtc tatgtctcaga atnccaagcg	480
gagagagtca gcctctggtt cagact	506

<210> 267

<211> 548

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(548)

<223> n = A,T,C or G

<400> 267

tcgagcggcc gcccgggcag gtcagcgctc tcaggacgtc accaccatgg cctgggctct	60
gctcctctc accctctca ctacgggcac agggctcctgg gccagtcctg ccctgactca	120
gcctccctcc gcgtccgggt ctcttggaaca gtcagtcacc atctcctgca ctggaaccag	180
cagtgaaggtt ggtgcttatg aatttgtctc ctggtaccaa caacacccag gcaaggcccc	240
caaactcatg atttctgagg tcaactaagcg gccctcagggt gtccctgact gcttctctgg	300
ctccaagtct ggcaacacgg cctccctgac cgtctctggg ctccangctg aggatgancg	360
tgattattac tggaagctca tatgcaggca acaacaattg ggtgttcggc ggaaggggacc	420
aagctgaccg tntaagggtc aagcccaagg ctgcccccc tcggctcactc tgttcccacc	480

ctcctctgaa gaagctttca agccaacaan gncacactgg gtgtgtctca taagtggact 540
 ttctaccc 548

<210> 268
 <211> 584
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(584)
 <223> n = A,T,C or G

<400> 268
 agcgtggtcg cggccgaggt ctgtagcttc tgtgggactt ccaactgctca ggcgtcaggc 60
 tcaggtagct gctggccgcg tacttgttgt tgctttgntt ggaggggtgtg gtggtctcca 120
 ctcccgcctt gacggggctg ctatctgcct tccaggccac tgtcacggct cccgggtaga 180
 agtcacttat gagacacacc agtgtggcct tgttggcttg aagctcctca gaggaggggtg 240
 ggaacagagt gaccgagggg gcagccttgg gctgacctag gacggtcagc ttggtccctc 300
 cgccgaacac ccaattgttg ttgcttgcct atgagctgca gtaataatca gcctcatcct 360
 cagcctggag cccagagacn gtcaagggag gcccgtgttt gccaaagactt ggaagccaga 420
 naagcgatca gggacccctg agggccgctt tacngacctc aaaaaatcat gaatttgggg 480
 ggcctttgcc tgggngttgg ttggtnacca gnaaaacaaa atttcataaa gcaccaacgt 540
 cactgctggt ttccagtgcg ngaanatggt gaactgaant gtcc 584

<210> 269
 <211> 368
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(368)
 <223> n = A,T,C or G

<400> 269
 agcgtggtcg cggccgaggt ccagcatcag gagccccgcc ttgccggctc tgggtcatcgc 60
 ctttcttttt gtggcctgaa acgatgtcat caattcgag tagcagaact gccgtctcca 120
 ctgctgtctt ataagtctgc agcttcacag ccaatggctc ccatatgcc agttccttca 180
 tgtccaccaa agtaccgctc tcaccattta caccacaggt ctcacagttc tcctgggtgt 240
 gcttggcccg aaggaggta agtanacgga tgggtgctgt cccacagttc tggatcaggg 300
 tacgaggaat gacctctagg gcctgggna caagccctgt atggacctgc ccgggcgggc 360
 ccgctcga 368

<210> 270
 <211> 368
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(368)
 <223> n = A,T,C or G

<400> 270

tcgagcggcc	gcccgggcag	gtccatacag	ggctgttgcc	caggccctag	aggn cattcc	60
ttgtaccctg	atccagaact	gtgggaccag	caccatccgt	ctacttacct	cccttcgggc	120
caagcacacc	caggagaact	gtgagacctg	gggtgtaaat	ggngagacgg	gtactttggt	180
ggacatgaag	gaactgggca	tatgggagcc	attggctgng	aagctgcana	cttataagac	240
agcagtggag	acggcagttc	tgctactgcg	aattgatgac	atcgtttcag	gccacaaaaa	300
gaaaggcgat	gaccanagcc	ggcaaggcgg	ggcttcctga	tgctggacct	cggccgccga	360
ccacgctt						368

<210> 271

<211> 424

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(424)

<223> n = A,T,C or G

<400> 271

agcgtggctg	cggccgaggt	ccactagagg	tctgtgtgcc	attgcccagg	cagagtctct	60
gcgttacaaa	ctcctaggag	ggcttgctgt	gcggagggcc	tqctatggtg	tqctgcgggt	120
catcatggag	agtggggcca	aaggctgcga	ggttgtggtg	tctgggaaac	tccgaggaca	180
gagggctaaa	tccatgaagt	ttgtggatgg	cctgatgata	cacagcggag	accctgttaa	240
ctactacggt	gacactgctg	tgcgccacgt	gttgctcana	caggggtgtgc	tgggcatcaa	300
ggtgaagatc	atgctgccct	gggaccanc	tggcaaaaat	ggcccttaaa	aacccttgc	360
cntgaccacg	tgaaccatth	gtgngaaccc	caagatgaan	atacttgccc	accaccccc	420
attc						424

<210> 272

<211> 541

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(541)

<223> n = A,T,C or G

<400> 272

tcgagcggcc	gcccgggcag	gtctgccaag	gagaccctgt	tatgctgtgg	ggactggctg	60
gggcatggca	ggcggctctg	gcttcccacc	cttctgttct	gagatggggg	tggtgggcag	120
tatctcatct	ttgggttcca	caatgctcac	gtggtcaggc	aggggcttct	tagggccaat	180
cttaccagtt	gggtcccagg	gcagcatgat	cttcaccttg	atgccagca	cacctgtct	240
gagcaacacg	tggcgcacag	cagtgtcaac	gtagtagtta	acagggcttc	cgctgtggat	300
catcaggcca	tccacaaaact	tcatggattt	agccctctgt	cctcggagtt	tccaaaaaca	360
ccacaacctc	gccagccttt	gggccccact	tcttcatgaa	tgaaaccgca	gcacaccatt	420
ancaaggccc	ttccgcacag	gnaagccctt	cctaaggagt	tttgtaaacy	caaaaaactc	480
ttgcctgggg	caaatgggca	cacagacctn	tantnggacc	ttggnccgcg	aaccaccgct	540
t						541

<210> 273

<211> 579

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(579)

<223> n = A,T,C or G

<400> 273

agcgtggctg	cggccgaggt	ctggccctcc	tggcaaggct	ggtgaagatg	gtcaccctgg	60
aaaacccgga	cgacctggtg	agagaggagt	tggtggacca	cagggtgctc	gtggtttccc	120
tggaactcct	ggacttcctg	gcttcaaagg	cattagggga	cacaatggtc	tggtatggatt	180
gaagggacag	cccgtgctc	ctggtgtgaa	gggtgaacct	ggngcccctg	gtgaaaatgg	240
aactccaggt	caaacaggag	cccnggggct	tcctggngag	agaggacgtg	ttggtgcccc	300
tggcccanac	ctgcccgggc	ggccgctcna	aaagccgaaa	tccagnacac	tggcggccgn	360
tactantgga	atccgaactt	cggtacaaaa	gcttggccgt	aatcatggcc	atagcttggt	420
ccctggggng	gaaattggta	ttccgctncc	aattccacac	aacataccga	acccggaaaag	480
cattaaagtg	taaaagccct	gggggggct	aaatgangtg	agcntaacte	ncattttaatt	540
ggcgttgccg	ttcactgccc	cgcttttcca	gtccgggna			579

<210> 274

<211> 330

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(330)

<223> n = A,T,C or G

<400> 274

tcgagcggcc	gcccgggcag	gtctggggcca	ggggcaccaa	cacgtcctct	ctcaccagga	60
agcccacggg	ctcctgtttg	acctggagtt	ccattttcac	caggggcacc	aggttcaccc	120
ttcacaccag	gagcaccggg	ctgtcccttc	aatccatcca	gaccattgtg	ncccctaattg	180
cctttgaagc	caggaagtcc	aggagtcca	gggaaaccac	gagcaccctg	tggtccaaca	240
actcctctct	caccaggctg	tccgggtttt	ccagggtgac	catcttcacc	agccttgcca	300
ggagggccag	acctcggccg	cgaccacgct				330

<210> 275

<211> 97

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(97)

<223> n = A,T,C or G

<400> 275

ancgtggctg	cggccgaggt	cctcaccaga	ggtgncacct	acaacatcat	agtggaggca	60
ctgaaagacc	ancagaggca	taagggttcg	gaagagg			97

<210> 276

<211> 610

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature
 <222> (1)...(610)
 <223> n = A,T,C or G

<400> 276
 tcgagcggcc gcccgggcag gtccattttc tccctgacgg tcccacttct ctccaatctt 60
 gtagttcaca ccattgtcat ggcaccatct agatgaatca catctgaaat gaccacttcc 120
 aaagcctaag cactggcaca acagttttaa gcctgattca gacattcggt cccactcatc 180
 tccaacggca taatgggaaa ctgtgtaggg gtcaaagcac gagtcacccg taggttggtt 240
 caagccttcg ttgacagagt tgtccacggg aacaacctct tcccgaaact tatgcctctg 300
 ctggtctttc agtgccctcca ctatgatgtt gtaggtggca cctctggtga ggacctcngn 360
 ccngaacaac gcttaagccc gnattctgca gaataatccc atcacacttg gcggccgctt 420
 cgancatgca tcntaaaagg ggccccaatt tcccccttat aagngaanc gtatttncca 480
 atttctactgg nccccgccgt tttacaaacg ncgggtgaact ggggaaaaac cctggcggtt 540
 acccaacttt aatcgccntt ggcagcacia tccccctttt tcgnccancn tgggcgtaaa 600
 taaccgaaaa 610

<210> 277
 <211> 38
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(38)
 <223> n = A,T,C or G

<400> 277
 ancngngtcg cggccgangt nttttttctt nttttttt 38

<210> 278
 <211> 443
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(443)
 <223> n = A,T,C or G

<400> 278
 agcgtggctg cggccgaggt ctgaggttac atgcgtgggt gtggacgtga gccacgaaga 60
 ccctgagggtc aagttcaact ggtacgtgga cggcgtggag gtgcataatg ccaagacaaa 120
 gccgcgggag gagcagtaca acagcacgta ccgggnggtc agcgtcctca ccgtcctgca 180
 ccagaattgg ttgaatggca aggagtacaa gngcaagggt tccaacaaaag cntcccagc 240
 cccntcga aaaccattt ccaaagccaa agggcagccc cgagaaccac aggtgtacac 300
 cctgccccca tcccgggagg aaaagancaa naaccnggtt cagccttaac ttgcttggtc 360
 naangctttt tatcccaacg nacttcccc ntggaantgg gaaaaaccaa tgggccaanc 420
 cgaaaaacaa ttacaanaac ccc 443

<210> 279
 <211> 348
 <212> DNA
 <213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(348)

<223> n = A,T,C or G

<400> 279

tcgagcggcc	gcccgggcag	gtgtcggagt	ccagcacggg	aggcgtggtc	ttgtagttgt	60
tctccggctg	cccattgctc	tcccactcca	cggcgatgtc	gctgggatag	aagcctttga	120
ccaggcaggt	caggctgacc	tggttcttgg	tcattctctc	ccgggatggg	ggcagggtga	180
acacctgggg	ttctcggggc	ttgccctttg	gttttgaana	tggttttctc	gatgggggct	240
ggaagggtt	tggtgnaaac	cttgcaactg	actccttgcc	attcaccag	ncctggngca	300
ggacgngag	gacnctnacc	acacggaacc	gggctgggtg	actgctcc		348

<210> 280

<211> 149

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(149)

<223> n = A,T,C or G

<400> 280

agcgtggctg	cggacgangt	cctgtcagag	tggnactgg	agaagttcca	ngaaccctga	60
actgtaagg	ttcttcatca	gtgccaacag	gatgacatga	aatgatgtac	tcagaagnn	120
cctggaatg	ggcccatgan	atggttgcc				149

<210> 281

<211> 404

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(404)

<223> n = A,T,C or G

<400> 281

tcgagcggcc	gcccgggcag	gtccaccaca	cccaattcct	tgctgggtatc	atggcagccg	60
ccacgtgcc	ggattaccgg	ctacatcatc	aagtatgaga	agcctgggtc	tcctcccaga	120
gaagtggctc	ctcgcccccg	ccctgggtgc	acagaggcta	ctattactgg	cctggaaccg	180
ggaaccgaat	atacaattta	tgtcattgcc	ctgaagaata	atcagaagag	cgagccctg	240
attggaagga	aaaagacaga	cgagcttccc	caactggtaa	cccttcacac	ccccaatctt	300
catggaccag	agatcttgga	tggtccttcc	acagttcaaa	agaccctttt	cggcaccccc	360
cctgggtatg	aacctgggaa	aanggnantt	aanccttcct	ggca		404

<210> 282

<211> 507

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(507)

<223> n = A,T,C or G

<400> 282

agcgtggtcg	cggccgaggt	ctgggatgct	cctgctgtca	cagtgaagata	ttacaggatc	60
acttacggag	aaacaggagg	aaatagccct	gtccaggagt	tcactgtgcc	tgggagcaag	120
tctacagcta	ccatcagcgg	ccttaaacct	ggaattgatt	ataccatcac	tgtgtatgct	180
gtcactggcc	gtggagacag	ccccgcaagc	agcaagccaa	ttccattaa	ttaccgaaca	240
gaaattgaca	aaccatccca	gatgcaagt	accgatgttc	aggacaacag	cattagtgtc	300
aagtggctgc	cttcaaggtn	ccctggtact	gggttacaga	ntaaccacca	ctcccaaaaa	360
tggaccagga	accacaaaaa	cttaaactgc	aggggtccaga	tcaaaacaga	aatgactatt	420
gaangcttgc	agcccacagt	gggagtatgn	gggtagtgn	tatgcttcag	aatccaagcg	480
gaaaaangtc	aagccttntg	ggttcaa				507

<210> 283

<211> 325

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(325)

<223> n = A,T,C or G

<400> 283

tcgagcggcc	gcccgggcag	gtccttgcat	ctctgcagt	tcttcttcac	catcagggtc	60
agggaaatagc	tcatggattc	catcctcagg	gctcgagtag	gtcaccctgt	acctggaaac	120
ttgcccctgt	gggctttccc	aagcaatttt	gatggaatcg	acatccacat	cagtgaatgc	180
cagtccttta	gggcgatcaa	tgttggttac	tgcagnctga	accagaggct	gactctctcc	240
gcttggtatc	tgagcataga	cactaaccac	atactccact	gtgggctgca	anccttcaat	300
aanncatttc	tgtttgatct	ggacc				325

<210> 284

<211> 331

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(331)

<223> n = A,T,C or G

<400> 284

tcgagcggcc	gcccgggcag	gtctggtggg	gtcctggcac	acgcacatgg	ggngttgnt	60
ctnatccagc	tgcccagccc	ccattggcga	gtttgagaag	gtgtgcagca	atgacaacaa	120
naccttcgac	tcttctctgc	acttctttgc	cacaaagtgc	acctggagg	gcaccaagaa	180
gggccacaag	ctccacctgg	actacatcgg	gccttgcaaa	tacatcccc	cttgcttggg	240
ctctgagctg	accgaattcc	cccttgcgca	tgccggactg	gctcaagaac	cgtcctggca	300
cccttgatg	anaggatga	agacacnacc	c			331

<210> 285

<211> 509

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(509)

<223> n = A,T,C or G

<400> 285

```

agcgtggtcg cggccgaggt ctgtcctaca gtcctcagga ctctactccc tcagcagcgt      60
ggtgaccgtg ccctccagca acttcggcac ccagacctac acctgcaacg tagatcacia      120
gcccagcaac accaaggtgg acaagagagt tgagcccaaa tcttgtgaca aaactcacac      180
atgcccaccg tgcccagcac ctgaactcct ggggggaccg tcagtcttcc tcttcccccg      240
catccccctt ccaaacctgc ccgggcggcc gctcgaaagc cgaattccag cacactggcg      300
gccggtacta gtgganccna acttggnanc caacctggng gaantaatgg gcataanctg      360
tttctggggg gaaattggta tccngtttac aattcccnca caacatacga gccggaagca      420
taaaagngta aaagcctggg gngggcctan tgaagtgaag ctaaactcac attaattngc      480
gttgccgctc actggcccg ctttccagc                                     509

```

<210> 286

<211> 336

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(336)

<223> n = A,T,C or G

<400> 286

```

tcgagcggcc gcccgggcag gtttgggaagg gggatgcggg ggaagaggaa gactgacggt      60
ccccccagga gttcaggtgc tgggcacggt gggcatgtgt gagttttgtc acaagatttg      120
ggctcaactc tcttgtccac cttggtgttg ctgggcttgt gatctacgtt gcaggtgtag      180
gtctgggngc cgaagttgct ggagggcacg gtcaccacgc tgctgaggga gtagagtcct      240
gaggactgta ngacagacct cggccgngac cagcctaagc cgaattctgc agatatccat      300
cacactggcg gccgctccga gcatgcattt tagagg                                     336

```

<210> 287

<211> 30

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(30)

<223> n = A,T,C or G

<400> 287

```

agcgtggncc cggacganga caacaacccc                                     30

```

<210> 288

<211> 316

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(316)

<223> n = A,T,C or G

<400> 288

tcgagcggcc	gcccgggcag	gnccacatcg	gcagggtcgg	agccctggcc	gccatactcg	60
aactggaatc	catcggtcat	gctcttgccg	aaccagacat	gcctcttgtc	cttgggggttc	120
ttgctgatgn	accagttctt	ctggggccaca	ctgggctgag	tggggtacac	gcaggtctca	180
ccagtctcca	tgttgagaa	gactttgatg	gcattccaggt	tgcagccttg	gttgggggtca	240
atccagtact	ctccactctt	ccagtcagag	tggcacatct	tgaggtcacg	gcaggtgcgg	300
gcgggggttct	tgacct					316

<210> 289

<211> 308

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(308)

<223> n = A,T,C or G

<400> 289

agcgtggtcg	cggccgaggt	ccagcctgga	gataanngtg	aaagtggtgc	ccccggacct	60
ccaggtatag	ctggacctcg	tggtagccct	ggtgagagag	gtgaaactgg	ccctccagga	120
cctgctggtt	tccctggtgc	tccctggacag	aatggtgaac	ctggnggtaa	aggagaaaaga	180
ggggctccgg	ntganaaagg	tgaaggaggc	cctcctgnat	tggcaggggc	cccangacct	240
agaggtggag	ctggccccc	tggcccccga	ggaggaaaagg	gtgctgctgg	tcctcctggg	300
ccacctgg						308

<210> 290

<211> 324

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(324)

<223> n = A,T,C or G

<400> 290

tcgagcggcc	gcccgggcag	gtctggggcca	ggaggaccaa	taggaccagt	aggacccctt	60
gggccatctt	tccctgggac	accatcagca	cctggaccgc	ctggttcacc	cttgtcaccc	120
tttggaccag	gacttccaag	acctcctctt	tctccaggca	ttccttgacg	accaggagta	180
ccancagcac	caggtggccc	aggaggacca	gcagcaccct	ttcctccttc	gggaccaggg	240
ggaccagctc	cacctctaag	tccctggggc	cctgccaatc	caggaggggc	tccttcacct	300
ttctcacccg	gagccctctt	ttct				324

<210> 291

<211> 278

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(278)

<223> n = A,T,C or G

<400> 291
tcgagcggcc gcccgggcag gtccaccggg atattcgggg gtctggcagg aatgggaggc 60
atccagaacg agaaggagac catgcaaagc ctgaacgacc gcctggcctc ttacctggac 120
agagtgagga gcctggagac cgacaaccgg aggctggaga gcaaaatccg ggagcacttg 180
gagaagaagg gacccacaggt cagagacttg agccattact tcaagatcat cgaggacctg 240
agggctcana ttttcgcaaa tactgcngac aatgcccc 278

<210> 292
<211> 299
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(299)
<223> n = A,T,C or G

<400> 292
atgcgnggtc gcgcccgang accanctctg gctcatactt gactctaaag nntcaccag 60
nanttacggn cattgccaat ctgcagaacg atgcgggcat tgtccgcant atttgcgaag 120
atctgagccc tcaggnctc gatgatcttg aagtaanggc tccagtctct gacctggggt 180
cccttcttct ccaagtgtc ccggattttg ctctccagcc tccggttctc ggtctccaag 240
ncttctcact ctgtccagga aaagaggcca ggcgngcgat cagggctttt gcatggact 299

<210> 293
<211> 101
<212> DNA
<213> Homo sapien

<400> 293
agcgtgggtc cggccgaggt tgtacaagct tttttttttt tttttttttt tttttttttt 60
tttttttttt tttttttttt tttttttttt tttttttttt t 101

<210> 294
<211> 285
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(285)
<223> n = A,T,C or G

<400> 294
tcgagcggcc gcccgggcag gtctgccaac accaagattg gccccgcgg catccacaca 60
gttngtgtgc ggggaggtaa caagaaatac cgtgccctga ggntggacgn ggggaatttc 120
tcctggggct cagagtgttg tactcgtaaa acaaggatca tcgatgttgt ctacaatgca 180
tctaataacg agctggttcg taccaagacc ctggtgaaga attgcatcgt gctcatngac 240
agcacaccgt accgacagtg ggtaccgaag tccactatg cncct 285

<210> 295
<211> 216
<212> DNA
<213> Homo sapien

<400> 295

tcgagcggcc	gcccgggcag	gtccaccaca	cccaattcct	tgctgggtatc	atggcagccg	60
ccacgtgcc	ggattaccgg	ctacatcatc	aagtatgaga	agcctgggtc	tcctcccaga	120
gaagtgggtcc	ctcggccccg	ccctgggtgc	acagaggcta	ctattactgg	cctggaaccg	180
ggaaccgaat	atacaattta	tgtcattgcc	ctgaag			216

<210> 296

<211> 414

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(414)

<223> n = A,T,C or G

<400> 296

agcgtgntcn	cggccgagga	tgggggaagct	cgnetgtctt	tttccttcca	atcaggggct	60
nnntcttctg	attattcttc	agggcaanga	cataaattgt	atattcggt	cccgggtcca	120
gnccagtaat	agtagcctct	gtgacaccag	ggcggggccg	agggaccact	tctctgggag	180
gagacccagg	cttctcatac	ttgatgatga	agccggtaat	cctggcacgt	gggcggctgc	240
catgatacca	ccaangaatt	gggtgtgggtg	gacctgcccg	ggcggggccg	tcgaaaancc	300
gaattcntgc	aagaatatcc	atcacacttg	ggcggggccgn	tcgaaccatg	catcntaaaa	360
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<210> 297

<211> 376

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(376)

<223> n = A,T,C or G

<400> 297

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ttcctgcccc	agccacctca	agagaaggct	cacgatgggtg	gccgctacta	ccgggctgat	180
gatgccaatg	tggttcgtga	ccgtgacctc	gaggtggaca	ccacctcaa	gagccttgag	240
ccagcagaat	cgaaaacatt	cggaacccaa	gaagggcaag	cccgcaaaga	aaccccgccc	300
gcacctggcc	gngaacctcc	aagaangtgc	ccacntcttg	actgggaaaa	aaagggaaaa	360
ntacttgga	ttggac					376

<210> 298

<211> 357

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(357)

<223> n = A,T,C or G

<400> 298

agcgtgggtcg	cggccgaggt	ccacatcggc	agggtcggag	ccctggccgc	catactcgaa	60
ctggaatcca	tcggtcatgc	tctcgccgaa	ccagacatgc	ctcttgctct	tgggggttctt	120
gctgatgtac	cagttcttct	gggccacact	gggctgagtg	gggtacacgc	aggtctcacc	180
agtctccatg	ttgcagaaga	ctttgatggc	atccagggtg	cagccttggt	tgggggtcaat	240
ccagtactct	ccactcttcc	agtcagaagt	ggcacatctt	gaggtcacgg	caggggtcgg	300
gcgggggttct	tgcgggctgc	ccttctgggc	tcccgaatg	ttctnngaac	ttgctgg	357

<210> 299

<211> 307

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(307)

<223> n = A,T,C or G

<400> 299

agcgtgggtcg	cggccgaggt	ccactagagg	tctgtgtgcc	attgcccagg	cagagtctct	60
gcgttacaaa	ctcctaggag	ggcttgctgt	gcggaggggc	tgctatgggtg	tgctgcgggtt	120
catcatggag	agtggggcca	aaggctgcga	ggttgtgggtg	tctgggaaac	tccgaggaca	180
gagggctaaa	tccatgaagt	ttgtggatgg	cctgatgatc	cacagcggag	accctgttaa	240
ctactacgtt	gacacttgct	tgtgcgccac	gtgttgctca	nacanggggtg	ggctgggcat	300
caaggng						307

<210> 300

<211> 351

<212> DNA

<213> Homo sapien

<400> 300

tcgagcggcc	gcccgggag	gtctgccaa	gagaccctgt	tatgctgtgg	ggactggctg	60
gggcatggca	ggcggctctg	gcttcccacc	cttctgttct	gagatggggg	tggtgggag	120
tatctcatct	ttgggttcca	caatgctcac	gtggtcaggc	aggggcttct	tagggccaat	180
cttaccagtt	gggtcccagg	gcagcatgat	cttcaccttg	atgccagca	caccctgtct	240
gagcaacacg	tggcgcacag	caagtgtcaa	cgtaaagtaag	ttaacagggg	ctccgctgtg	300
gatcatcagg	ccatccacaa	acttcatgga	tttaaccctc	tgtcctcgga	g	351

<210> 301

<211> 330

<212> DNA

<213> Homo sapien

<400> 301

tcgagcggcc	gcccgggag	gtgtttcaga	ggttccaagg	tccactgtgg	aggtcccagg	60
agtgtctgggtg	gtgggcacag	aggtccgatg	ggtgaaacca	ttgacataga	gactgttcct	120
gtccagggtg	taggggcca	gctctttgat	gccattggcc	agttggctca	gctcccagta	180
cagccgctct	ctgttgagtc	cagggctttt	ggggtaaga	tgatggatgc	agatggcatc	240
cactccagtg	gctgtccat	ccttctcgga	cctgagagag	gtcagtctgc	agccagagta	300
cagagggcca	acactggtgt	tctttgaata				330

<210> 302

<211> 317

<212> DNA

<213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(317)
 <223> n = A,T,C or G

<400> 302
 agcgtgggtcg cggccgaggt ctgtactggg agctaagcaa actgaccaat gacattgaag 60
 agctggggccc ctacaccctg gacaggaaca gtctctatgt caatgggttc acccatcaga 120
 gctctgtgnc caccaccagc actcctggga cctccacagt ggatttcaga acctcagga 180
 ctccatcctc cctctccagc cccacaatta tggctgctgg ccctctcctg gtaccattca 240
 ccctcaactt caccatcacc aacctgcagt atgggggagga catgggtcac cctgnctcca 300
 ggaagttcaa caccaca 317

<210> 303
 <211> 283
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(283)
 <223> n = A,T,C or G

<400> 303
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 ggtctgggac cctgagcagt ccagcgagga cttgggtctta gttgagcaat ttggctagga 120
 ggatagtatg cagcacggnt ctgagncgtg gggatagctg ccatgaagta acctgaagga 180
 ggtgctgggt ggtanggggt gattacaggg ttgggaacag ctggtacact tgccattctc 240
 tgcataact ggtagtgag gtgagcctgg ccctcttctt ttg 283

<210> 304
 <211> 72
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(72)
 <223> n = A,T,C or G

<400> 304
 agcgtgggtcg cggccgaggt gagccacagg tgaccggggc tgaagctggg gctgctggnc 60
 ctgctgggtcc tg 72

<210> 305
 <211> 245
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(245)
 <223> n = A,T,C or G

<400> 305

cagcngctcc	nacggggcct	gngggaccaa	caacaccgtt	ttcaccctta	ggccctttgg	60
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tggggccagc	aggaccgacc	tcaccacgtt	caccagggct	tccccgagga	ccagcaggac	180
cagcaggacc	agcagcccca	gcttcgcccc	ggtcacctgt	ggctcacctc	ggccgcgacc	240
acgct						245

<210> 306

<211> 246

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(246)

<223> n = A,T,C or G

<400> 306

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agagtgagga	gcctggagac	cganaaccgg	aggctggana	gcaaaatccg	ggagcacttg	180
gagaagaagg	gaccccaggt	caagagactg	gagccattac	ttcaagatca	tcgaggggacc	240
tggagg						246

<210> 307

<211> 333

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(333)

<223> n = A,T,C or G

<400> 307

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aagacgggca	ttgtcaatct	gcagaacgat	gcgggcattg	tccgcagtat	ttgcgaagat	120
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cttctttctc	aagtgtctcc	ggattttgct	ctccagcctc	cggttctcgg	tctccaggct	240
cctcactctg	tccaggtaag	aaggcccagg	cggtcgttca	ggctttgcat	ggtctccttc	300
tcgttctgga	tgccctcccat	tcctgccaga	ccc			333

<210> 308

<211> 310

<212> DNA

<213> Homo sapien

<400> 308

tcgagcggcc	gcccgggcag	gtcaggaagc	acattgggtct	tagagccact	gcctcctgga	60
ttccacctgt	gctgcggaca	tctccaggga	gtgcagaagg	gaagcagggtc	aaactgctca	120
gatcagtcag	actggctggt	ctcagttctc	acctgagcaa	ggtcagtctg	cagccagagt	180
acagagggcc	aacactgggt	ttcttgaaca	agggttgag	cagaccctgc	agaaccctct	240
tccgtggtgt	tgaacttctt	ggaaaccagg	gtgttgcatg	tttttctca	taatgcaagg	300
ttggtgatgg						310

<210> 309
<211> 429
<212> DNA
<213> Homo sapien

<400> 309
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ctggaatcca tcggtcatgc tctcgccgaa ccagacatgc ctcttgctct tggggttctt 120
gctgatgtac cagttcttct gggccacact gggctgagtg gggtagaccg caggtctcac 180
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cccgtcga 429

<210> 310
<211> 430
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(430)
<223> n = A,T,C or G

<400> 310
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ccagtttcga gtattggcgg ccagggcttc ccgaccttg ccgatgtgga cctcggccgc 420
gaccaccgct 430

<210> 311
<211> 2996
<212> DNA
<213> Homo sapien

<400> 311
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<210> 312

<211> 914

<212> PRT

<213> Homo sapien

<400> 312

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Leu Gly Pro Pro Gln Trp Thr Trp Glu His Leu Gly Leu Gln Phe Leu
          20          25          30
Asn Leu Val Pro Arg Leu Pro Ala Leu Ser Trp Cys Tyr Ser Leu Ser
          35          40          45
Thr Ser Pro Ser Pro Thr Cys Gly Met Arg Arg Thr Cys Ser Thr Leu
          50          55          60
Ala Pro Gly Ser Ser Thr Pro Arg Arg Gly Ser Phe Arg Ala Trp Ser
65          70          75          80
Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu
          85          90          95

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Thr Leu Leu Arg Pro Glu Lys Asp Gly Thr Ala Thr Gly Val Asp Ala
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 Ile Cys Thr His His Pro Asp Pro Lys Ser Pro Arg Leu Asp Arg Glu
 115 120 125
 Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr His Asn Ile Thr Glu Leu
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 Gly Pro Tyr Ala Leu Asp Asn Asp Ser Leu Phe Val Asn Gly Phe Thr
 145 150 155 160
 His Arg Ser Ser Val Ser Thr Thr Ser Thr Pro Gly Thr Pro Thr Val
 165 170 175
 Tyr Leu Gly Ala Ser Lys Thr Pro Ala Ser Ile Phe Gly Pro Ser Ala
 180 185 190
 Ala Ser His Leu Leu Ile Leu Phe Thr Leu Asn Phe Thr Ile Thr Asn
 195 200 205
 Leu Arg Tyr Glu Glu Asn Met Trp Pro Gly Ser Arg Lys Phe Asn Thr
 210 215 220
 Thr Glu Arg Val Leu Gln Gly Leu Leu Arg Pro Leu Phe Lys Asn Thr
 225 230 235 240
 Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro
 245 250 255
 Glu Lys Asp Gly Glu Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg
 260 265 270
 Pro Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu Gln Leu Tyr Leu Glu
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 Leu Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu
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 Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val
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 Pro Thr Thr Ser Thr Gly Val Val Ser Glu Glu Pro Phe Thr Leu Asn
 325 330 335
 Phe Thr Ile Asn Asn Leu Arg Tyr Met Ala Asp Met Gly Gln Pro Gly
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 Ser Leu Lys Phe Asn Ile Thr Asp Asn Val Met Lys His Leu Leu Ser
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 Pro Leu Phe Gln Arg Ser Ser Leu Gly Ala Arg Tyr Thr Gly Cys Arg
 370 375 380
 Val Ile Ala Leu Arg Ser Val Lys Asn Gly Ala Glu Thr Arg Val Asp
 385 390 395 400
 Leu Leu Cys Thr Tyr Leu Gln Pro Leu Ser Gly Pro Gly Leu Pro Ile
 405 410 415
 Lys Gln Val Phe His Glu Leu Ser Gln Gln Thr His Gly Ile Thr Arg
 420 425 430
 Leu Gly Pro Tyr Ser Leu Asp Lys Asp Ser Leu Tyr Leu Asn Gly Tyr
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 Asn Glu Pro Gly Pro Asp Glu Pro Pro Thr Thr Pro Lys Pro Ala Thr
 450 455 460
 Thr Phe Leu Pro Pro Leu Ser Glu Ala Thr Thr Ala Met Gly Tyr His
 465 470 475 480
 Leu Lys Thr Leu Thr Leu Asn Phe Thr Ile Ser Asn Leu Gln Tyr Ser
 485 490 495
 Pro Asp Met Gly Lys Gly Ser Ala Thr Phe Asn Ser Thr Glu Gly Val
 500 505 510
 Leu Gln His Leu Leu Arg Pro Leu Phe Gln Lys Ser Ser Met Gly Pro
 515 520 525
 Phe Tyr Leu Gly Cys Gln Leu Ile Ser Leu Arg Pro Glu Lys Asp Gly

530		535		540
Ala Ala Thr Gly Val	Asp Thr Thr Cys Thr Tyr	His Pro Asp Pro Val		
545	550	555	560	
Gly Pro Gly Leu Asp	Ile Gln Gln Leu Tyr Trp	Glu Leu Ser Gln Leu		
	565	570	575	
Thr His Gly Val Thr	Gln Leu Gly Phe Tyr Val	Leu Asp Arg Asp Ser		
	580	585	590	
Leu Phe Ile Asn Gly Tyr	Ala Pro Gln Asn Leu Ser	Ile Arg Gly Glu		
	595	600	605	
Tyr Gln Ile Asn Phe His	Ile Val Asn Trp Asn	Leu Ser Asn Pro Asp		
	610	615	620	
Pro Thr Ser Ser Glu Tyr	Ile Thr Leu Leu Arg	Asp Ile Gln Asp Lys		
	625	630	635	640
Val Thr Thr Leu Tyr	Lys Gly Ser Gln Leu His	Asp Thr Phe Arg Phe		
	645	650	655	
Cys Leu Val Thr Asn	Leu Thr Met Asp Ser	Val Leu Val Thr Val Lys		
	660	665	670	
Ala Leu Phe Ser Ser	Asn Leu Asp Pro Ser	Leu Val Glu Gln Val Phe		
	675	680	685	
Leu Asp Lys Thr Leu	Asn Ala Ser Phe His	Trp Leu Gly Ser Thr Tyr		
	690	695	700	
Gln Leu Val Asp Ile	His Val Thr Glu Met	Glu Ser Ser Val Tyr Gln		
	705	710	715	720
Pro Thr Ser Ser Ser	Ser Thr Gln His Phe Tyr	Leu Asn Phe Thr Ile		
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Thr Asn Leu Pro Tyr	Ser Gln Asp Lys Ala	Gln Pro Gly Thr Thr Asn		
	740	745	750	
Tyr Gln Arg Asn Lys	Arg Asn Ile Glu Asp	Ala Leu Asn Gln Leu Phe		
	755	760	765	
Arg Asn Ser Ser Ile	Lys Ser Tyr Phe Ser	Asp Cys Gln Val Ser Thr		
	770	775	780	
Phe Arg Ser Val Pro	Asn Arg His His Thr	Gly Val Asp Ser Leu Cys		
	785	790	795	800
Asn Phe Ser Pro Leu	Ala Arg Arg Val Asp	Arg Val Ala Ile Tyr Glu		
	805	810	815	
Glu Phe Leu Arg Met	Thr Arg Asn Gly Thr	Gln Leu Gln Asn Phe Thr		
	820	825	830	
Leu Asp Arg Ser Ser	Val Leu Val Asp Gly Tyr	Phe Pro Asn Arg Asn		
	835	840	845	
Glu Pro Leu Thr Gly	Asn Ser Asp Leu Pro	Phe Trp Ala Val Ile Leu		
	850	855	860	
Ile Gly Leu Ala Gly	Leu Leu Gly Leu Ile	Thr Cys Leu Ile Cys Gly		
	865	870	875	880
Val Leu Val Thr Thr	Arg Arg Arg Lys Lys	Glu Gly Glu Tyr Asn Val		
	885	890	895	
Gln Gln Gln Cys Pro	Gly Tyr Tyr Gln Ser	His Leu Asp Leu Glu Asp		
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Leu Gln				

<210> 313

<211> 656

<212> DNA

<213> Homo sapiens

<400> 313

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agaggccgtt aggcaggcac cccctattcc tgcctcccca actggatcag gtagaacaac 600
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<210> 314

<211> 519

<212> DNA

<213> Homo sapiens

<400> 314

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gtttaaggat ggtctcggtg gttaggccca ctagaataaa ctgagtccaa tacctctaca 180
cagttatgtt taactgggct ctctgacacc gggaggaagg tggcggggtt taggtgttgc 240
aaacttcaat ggttatgcgg ggatgttcac agagcaagct ttggtatcta gctagtctag 300
cattcattag ctaatgggtg cctttggtat ttattaaaat caccacagca tagggggact 360
ttatgtttag gttttgtcta agagttagct tatctgcttc ttgtgctaac agggctattg 420
ctaccaggga ctttgacat gggggccagc gtttgaaac ctcatctagt tttttgaga 480
gataggccac tggccttga cctcgccgc gaccacgt 519
```

<210> 315

<211> 441

<212> DNA

<213> Homo sapiens

<400> 315

```
cacagagcgt ttattgacac caccactcct gaaaattggg atttcttatt aggttccct 60
aaaagttccc atgttgatta catgtaaata gtcacatata tacaatgaag gcagtttctt 120
cagaggcaac cagggtttat agtgctaggt aaatgtcatc tctttgtgc tactgactca 180
ttgtcaaagc tctctgcact gttttcagcc tctccacgtt gcctctgtcc tgcttcttag 240
ttccttcttt gtgacaaacc aaaagaataa gaggatttag aacaggactg cttttccct 300
atgatttaaa aattccaatg actttcgccc ttgggagaaa tttccaagga aatctctctc 360
gctcgctctc tccgttttcc tttgtgagct tctgggggag ggtagtggt gactttttga 420
tacgaaaaaa tgcattttgt g 441
```

<210> 316

<211> 247

<212> DNA

<213> Homo sapiens

<400> 316

```
tggcgcggt gctggatttc accttcttgc acctgccggt gagcgctggt ggtctaaagg 60
ggcgggatac tccattatgg cccctcgccc tgtagggtcg gaatagttag aaaaggcaac 120
ccagtctagc ttggtaagaa gagagacatg cccccaacct cggcgccctt tttctcacg 180
atctgctgtc cttacttcag cgactgcagg agcttcacct gcaagaaaac agcattgagc 240
tgctgac 247
```

<210> 317
<211> 409
<212> DNA
<213> Homo sapiens

<400> 317
tgacagggct cctggagttg ttaagtcacc aagtagctgc aggggatgga cactgccccca 60
cacgatgtgg gatgaacagc agccttggtt tgtagccag ggtgtccatg gatttgaccc 120
gaatgctccc tggaggccct gtggcgagga caggcactgg atgggccaga ccctctggct 180
ggaggagtgg tggagccagg actgggcctt cagccatgag ggctagaata acctgacctc 240
ttgcattcta aactgggtc attaatgaca cttttccagt ggatgttgca aaaaccaaca 300
ctgtcaggaa cctggccctg ggagggtca ggtgagctca caaggagagg tcaagccaag 360
ccaaagggtg ggkaacacac aacaccaggg gaaaccagcc cccaaacca 409

<210> 318
<211> 320
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)... (320)
<223> n = A,T,C or G

<400> 318
caaggnagat cttaagnngg gtcntatgta agtgtgtctc tggctccagg gttcctggag 60
cctcacgagg tcagggggaa ccttgtagaa ctccaccagc agcatcatct cgtgaaggat 120
gtcatttggtc aggaagctgt cctggacgta ggccatctcc acatccatgg ggatgccata 180
gtcactgggc ctttgctcgg gaggaggcat caccagaaa ggcgagatct tggactcggg 240
gcctgggttg ccagaatagt aaggggagca naggaggcg aggcagggtt ggaagccatt 300
gctggagccc tgcagccgca 320

<210> 319
<211> 212
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)... (212)
<223> n = A,T,C or G

<400> 319
tgaagcaata gcgcccccat tttacaggcg gagcatggaa gccagagagg tgggtggggg 60
aggggggtcct tccctggctc aggcagatgg gaagatgagg aagccgctga agacgctgtc 120
ggcctcagag ccctggtaaa tgtgaccctt tttgggtct ttttcaacct anacctgggtc 180
acctgtctgc agacctcggc cgcgaccacg ct 212

<210> 320
<211> 769
<212> DNA
<213> Homo sapiens

<400> 320

```

tggaggtgta gcaagtgaag gagatytcat gcaagagtgt cacagcagag ccctaaascc 60
tccaactcac cagtgaagaga tgagactgcc cagtactcag ccttcactctc ctggggccacc 120
tggagggcgt ctttctccat cagcgcatac tgagcagggg tactcagatc cttcttgga 180
cctacaagga agagaagcac actggaaggg tcattctcct tcagggcatc ggccagccac 240
tgcctgccat gggaggtgga aagtaaggga tgagtgaagc tgcagggccc ctcccactga 300
cattcatagg cccaattacc cctctctctg tctacatgc attcttcttc ttcctgacca 360
ccctctgtt ctgaaccctc tcttcccgga gcctccatt atattgcagg atgctcactt 420
acttggtatg ttccagagat gccacatcat tcagggtgaa gacaatgatg atggcttgga 480
agagtggcag aaacagcccc aggttgacag ggaagacact actgctcatt tccccaatcc 540
ttccagctcc atatgagaaa gccatgtgca ctctgagacc cacctacccc acttcaccca 600
gccccttacc ttgagctcct ctatagtagg ttgatgcaat gcatttgaac ctctcctgcc 660
cagcggtatc ccaactggaa ggaaggaaga gtgaagcaca ggtatgtatc ttgggggggtg 720
tgggtgctgg ggagaaggga tagctggaag ggggtgaggaa gcactcaca 769

```

<210> 321

<211> 690

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(690)

<223> n = A,T,C or G

<400> 321

```

tgggctgtgg gcggcacctg tgctctgcag gccagacagc gatagaagcc tttgtctgtg 60
cctactcccc cggaggcaac tgggaggtca acgggaagac aatcatcccc tataagaagg 120
gtgcctggtg ttcgctctgc acagccagtg tctcaggctg cttcaaagcc tgggaccatg 180
cagggggggt ctgtgaggtc cccaggaatc cttgtcgcac gagctgccag aaccatggac 240
gtctcaacat cagcacctgc cactgccact gtccccctgg ctacacgggc agatactgcc 300
aagtgaagtg cagcctgcag tgtgtgcacg gccggttccg ggaggaggag tgctcgtgcg 360
tctgtgacat cggctacggg ggagcccagt gtgccaccaa ggtgcatttt cccttccaca 420
cctgtgacct gaggatcgac ggagactgct tcatggtgtc ttcagaggca gacacctatt 480
acagaagcca ggatgaaatg tcagaggaat ggcggggtgc tggcccagat caagagccag 540
aaagtgcagg acatcctcgc cttctatctg ggccgcctgg agaccaccaa cgaggtgact 600
gacagtgact ttgagaccag gaacttctgg atngggctca cctacaagac cgccaaggac 660
tccrtncgct gggccacagc ggagcaccag

```

690

<210> 322

<211> 104

<212> DNA

<213> Homo sapiens

<400> 322

```

gtcgcaagcc ggagcaccac catgtagcct ttcccgaagt accggacctt ctctctctcc 60
acgctcacat cacggacatc atggagcagg accaccacct ggtc

```

104

<210> 323

<211> 118

<212> DNA

<213> Homo sapiens

<400> 323

```

gggccctggg cgcttccaaa tgaccagga ggtggtctgc gacgaatgcc ctaatgtcaa 60
actagtgaat gaagaacgaa cactggaagt agaaatagag cctgggggtga gagacgga 118

```

<210> 324
<211> 354
<212> DNA
<213> Homo sapiens

<400> 324
tgctctccgg gagcttgaag aagaaactgg ctacaaaggg gacattgccg aatgttctcc 60
agcggctctgt atggacccag gcttgtcaaa ctgtactata cacatcgtga cagtcaccat 120
taacggagat gatgccgaaa acgcaaggcc gaagccaaag ccaggggatg gagagtttgt 180
ggaagtcatt tctttaccca agaatgacct gctgcagaga cttgatgctc tggtagctga 240
agaacatctc acagtggacg ccaggggtcta ttcctacgct ctacgctga aacatgcaaa 300
tgcaaaagcca tttgaagtgc ctttcttgaa attttaagcc caaatatgac actg 354

<210> 325
<211> 642
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(642)
<223> n = A,T,C or G

<400> 325
ncatgcttga atgggctcct ggtgagagat tgccccctgg tggtgaaaca atcgtgtgtg 60
cccactgata ccaagaccaa tgaaagagac acagttaagc agcaatccat ctcatttcca 120
ggcacttcaa taggtcgtg attggtcctt gcaccagcag tggtagtcgt acctatttca 180
gagaggtctg aaattcaggt tcttagtttg ccagggacag gccctacctt atattttttt 240
ccatcttcat catccacttc tgcttacagt ttgtgctta caataactta atgatggatt 300
gagttatctg ggtggtctct agccatctgg gcagtgtggg tctgtctaac caaagggcat 360
tggcctcaaa ccctgcattt ggtttagggg ctaacagagc tcctcagata atcttcacac 420
acatgtaact gctggagatc ttattctatt atgaataaga aacgagaagt ttttccaaag 480
tgtagtcag gatctgaagg ctgtcattca gataaccag cttttccttt tggcttttag 540
ccattcaga ctttgccaga gtcaagccaa ggattgcttt tttgctacag ttttctgcca 600
aatggcctag ttcctgagta cctggaaacc agagagaaag ag 642

<210> 326
<211> 455
<212> DNA
<213> Homo sapiens

<400> 326
tccgtgagga tgagcttcga gtccttcacc aggcactgca ggggcacagt cacgtcaatc 60
accttcacct tctcgtctct cctgctcttg tcattgacaa acttcccgtta ccaggcattg 120
acgatgatga ggcccattct ggactcttct gcctcaatta tccttcggac agattcctgc 180
atcagccgga cagcggactc cgcctcttgc ttcttctgca gcacatcggt ggcggcgctt 240
tccctctgct tctccaattc cttctcttct tgagccctga ggtatggttt gatgatcaga 300
cgggtgcatgg caaagtagac cactagaggc cccacgggtg catagaacat ggcgctgggc 360
agaagctggg ccgtcaagtg aatagggaag aagtatgtct gactggccct gttgagcttg 420
actttgagag aaacgccctg tggaaactcca acgct 455

<210> 327
<211> 321
<212> DNA

<213> Homo sapiens

<400> 327

```

ttcactgtga actcgagtc ctcgatgaac tcgcacagat gtgacagccc tgtctccttg 60
ctctctgagt tctcttcaat gatgctgatg atgcagtcca cgatagcgcg cttataactca 120
aagccaccct cttcccgcag catgggtgaac aggaagttca taaggacggc gtgtttgcga 180
ggatatttct gacacagggc actgatggcc tggacaacca ccaccttgaa ttcattccgag 240
atttctgaca tgaaggagga gatctgcttc atgaggcggt cgatgctgct ctgctgccc 300
gtcttaagga ggggtggtgat g                                     321

```

<210> 328

<211> 476

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(476)

<223> n = A,T,C or G

<400> 328

```

tgcaggaggg gccatggggg ctgtgaatgg gatgcagccc catgggtgtcc ctgataaatc 60
cagtgtgcag tctgatgaag tctgggtggg tgtggtctac gggctggcag ctaccatgat 120
ccaagaggta atgcactcct tttcccatct ctccaccatc tgtatcctgg ccmagaaaaa 180
cttcccttca aaccaaccaa aattttcttt caaaggcata acccaaatgc catccttggg 240
ccggtctaataaagcctccc ccatttttcc cctgggtatgc attcccaggc tccctggcct 300
tncagggtct nctgtctgtg ggtcatagtt tatctcctcc cacttgctgg gagctccttg 360
aaggcaaaga ctctactgcc tccatctatc cagtggaaagt ggctcttcag aggggtgcaa 420
gttagtatgt atgactgtca tctctcccaa cagggcctga cttggsaggg ctcca 476

```

<210> 329

<211> 340

<212> DNA

<213> Homo sapiens

<400> 329

```

cgaggagat tgccagcacc ctgatggaga gtgagatgat ggagatcttg tcagtgtctag 60
ctaagggtga ccacagccct gtcacaaggg ctgctgcagc ctgcctggac aaagcagtgg 120
aatatgggct tatccaaccc aaccaagatg gagagtgagg gggttgtccc tgggcccag 180
gctcatgcac acgctaccta ttgtggcacg gagagtaagg acggaagcag ctttggtctg 240
tggtggctgg catgcccaat actcttgccc atcctcgctt gctgccctag gatgtcctct 300
gttctgagtc agcggccacg ttcagtcaca cagccctgct                                     340

```

<210> 330

<211> 277

<212> DNA

<213> Homo sapiens

<400> 330

```

tgtcaccatc acattggtgc caaataccca gaagacatcg tagatgaaga gtccgcccag 60
caggatgcag ccagtgtctga cattgttgag gtgcaggagc tctactccat taaggagagaa 120
ggccaggcca aaaaggttgt tggcaatcca gtgcttcttc agcaggtagc agacgccaac 180
gatgctgctc aggcccaggc acaccaggtc cttggtgtca aattcataat tgatgatctc 240
ctccttgttt tcccagaacc ctgtgtgaag agcagac                                     277

```

<210> 331
<211> 136
<212> DNA
<213> Homo sapiens

<400> 331
ttgcttccca cctcctttct ctgtcctctc ctgaggttct gccttacaat ggggacactg 60
atacaaacca cacacacaat gaggatgaaa acagataaca ggtaaaatga cctcacctgc 120
ccgggcggcc gctcga 136

<210> 332
<211> 184
<212> DNA
<213> Homo sapiens

<400> 332
ttgtgagata aacgcagata ctgcaatgca ttaaaacgct tgaaatactc atcagggatg 60
ttgctgatct tattgttgct taagtagaga gttagaagag agacagggag accagaaggc 120
agtctggcta tctgattgaa gctcaagtca aggtattcga gtgatttaag acctttaaaa 180
gcag 184

<210> 333
<211> 384
<212> DNA
<213> Homo sapiens

<400> 333
cggaaaactt cgaggaattg ctcaaagtgc tgggggtgaa tgtgatgctg aggaagattg 60
ctgtggctgc agcgtccaag ccagcagtgg agatcaaaca ggagggagac actttctaca 120
tcaaaacctc caccaccgtg cgcaccacag agattaactt caagggtggg gaggagtgtg 180
aggagcagac tgtggatggg aggcctgta agagcctggt gaaatgggag agtgagaata 240
aaatggtctg tgagcagaag ctctgaagg gagagggccc caagacctcg tggaccagag 300
aactgaccaa cgatggggaa ctgatcctga ccatgacggc ggatgacgtt gtgtgcacca 360
gggtctacgt ccgagagtga gcgg 384

<210> 334
<211> 169
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(169)
<223> n = A,T,C or G

<400> 334
cnacaaacag agcagacacc ctggatccgg tcctgctact ggccaggacg gctggaccgt 60
aaaattgaat ttccacttcc tgaccgccgc cagaagagat tgattttctc cactatcact 120
agcaagatga acctctctga ggaggttgac ttggaagact atgtngccc 169

<210> 335
<211> 185
<212> DNA
<213> Homo sapiens

<400> 335

ccaggtttgc agcccaggct gcacatcagg ggactgcctc gcaatacttc atgctgttgc 60
tgctgactga tgggtgctgtg acggatgtgg aagccacacg tgaggctgtg gtgcgtgcct 120
cgaacctgcc catgtcagtg atcattgtgg gtgtgggtgg tgctgacttt gaggccatgg 180
agcag 185

<210> 336

<211> 358

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(358)

<223> n = A,T,C or G

<400> 336

ctgcccctgc cttacggcgg ccaganacac acccaggatg gcattggccc caaacttggg 60
tttgtttctca gtcccatcca actccagcat caggttgtcc agtttctctt gtcaccacac 120
agagagacct gagctgatga gggctggcgc gatggtggag ttgatgtggt ccaactgcctt 180
caggacacct ttgcctaagt aacgctgttt gtctccatcc ctcagctcca gggcctcata 240
gatgcccgtg gaggtccac tgggcaactgc agcccggaaa agacctttgg cagtatagag 300
atccacctcc actgtggggg tcccgcggga gtccaggatc tcccgggccc agatcttc 358

<210> 337

<211> 271

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(271)

<223> n = A,T,C or G

<400> 337

cacaaagcca ccagccnggg aaatcagaat ttacttgatg caactgactt gtaatagcca 60
gaaatcctgc ccagcatggg attcagaacc tgggtctgcaa ccaaatccac cgtcaaagtt 120
catacaggat aaaacaaatt caattgcctt ttccacatta atagcatcaa gcttccccaa 180
caaagccaaa gttgccaccg cacaaaaaga gaattctgtg tcaatttctc cctactttat 240
aaaagtagat ttttcacatc ccatgaagca g 271

<210> 338

<211> 326

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(326)

<223> n = A,T,C or G

<400> 338

ctgtgctccc gactngnnca tctcaggtac caccgactgc actgggcggg gccctctggg 60
gggaaaggct ccacggggca gggatacatc tcgaggccag tcatcctctg gaggcagccc 120
aatcagggtca aagattttgc ccaactgggc ggcttcagag ttccacaga agagaggctt 180

tcgacgaaac atctctgcaa agatacagcc aacactccac atgtccacag gtgttgcata 240
tgtggactgc agaagaactt cgggagctcg gtaccagagt gtaacaacca cgggtgtaag 300
tgccatctgg tagctgtaga ttctgg 326

<210> 339

<211> 260

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(260)

<223> n = A,T,C or G

<400> 339

ttcacctgag gactcatttc gtgccctttg ttgacttcaa gcaaagncct tcanggtctn 60
caaggacgnc acatttccac ttgcgaatgn nctcanggt catcttgaag aanaagnanc 120
ccaagtgctg gatcccagac tcgggggtaa ccttgtgggt aagagctcat ccagtttatg 180
ctttaggacg tccanctact cgggggagct ggaagcctgc gtggatgcgg ccctgctgga 240
cctcggccgc gaccacgcta 260

<210> 340

<211> 220

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(220)

<223> n = A,T,C or G

<400> 340

ctggaagccc ggctnggnet ggcagcggaa ggagccaggc aggttcacgc agcgggtgctg 60
gcagtagcgg tagcggcact cgtctatgtc cacacactcg ggcccgatct tgccgtaacc 120
atcagggcag gtgcactgat aggagccagg caagttatgg cagtcctggc tggggcgaca 180
gtcgtgcagg gcctgggcac actcgtccac atccacacag 220

<210> 341

<211> 384

<212> DNA

<213> Homo sapiens

<400> 341

ctgctaccag gggagcgaga gctgactatc ccagcctcgg ctaatgtatt ctacgccatg 60
gatggagctt cacacgattt cctcctgcgg cagcggcgaa ggtcctctac tgctacaccg 120
ggcgtcacca gtggcccgtc tgccctcagg actcctccga gtgagggagg agggggctcc 180
tttcccagga tcaaggccac agggaggaag attgcacggg cactgttctg agggaggaagc 240
cccgttggtt tacagaagtc atgggtgttca taccagatgt gggtagccat cctgaatggt 300
ggcaattata tcacattgag acagaaattc agaaagggag ccagccaccc tggggcagtg 360
aagtgccact ggtttaccag acag 384

<210> 342

<211> 245

<212> DNA

<213> Homo sapiens

<400> 342

ctggctaagc tcatcattgt tactggtggg caccatgtcc ttgaagcttc aggcaagcaa 60
tgtaaccaac aagaatgacc ccaagtccat caactctcga gtcttcattg gaaacctcaa 120
cacagctctg gtgaagaaat cagatgtgga gaccatcttc tctaagtatg gccgtgtggc 180
cggctgttct gtgcacaagg gctatgcctt tgttcagtac tccaatgagc gccatgccc 240
ggcag 245

<210> 343

<211> 611

<212> DNA

<213> Homo sapiens

<400> 343

ccaaaaaaat caagatttaa tttttttatt tgcactgaaa aactaatcat aactgttaat 60
tctcagccat ctttgaagct tgaaagaaga gtctttggta ttttgtaaac gttagcagac 120
tttcctgcca gtgtcagaaa atcctattta tgaatcctgt cggatttcct tggatatctga 180
aaaaaatacc aaatagtacc atacatgagt tatttctaag tttgaaaaat aaaaagaaat 240
tgcacacac taattacaaa atacaagttc tggaaaaaat atttttcttc attttaaaac 300
tttttttaac taataatggc tttgaaagaa gaggtctaata ttgggggtgg taactaaaat 360
caaaagaaat gattgacttg agggctctctg tttggttaaga atacatcatt agcttaaaata 420
agcagcagaa ggtagtattt aattatgtag ctctgtttaa tattaagtgt tttttgtctg 480
ttttacctca atttgaacag ataagtttgc ctgcatgctg gacatgcctc agaaccatga 540
atagcccgtg ctagatcttg ggaacatgga tcttagagtc ctttgaata agttcttata 600
taaatacccc c 611

<210> 344

<211> 311

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(311)

<223> n = A,T,C or G

<400> 344

nctcgaaaaa gcccaagaca gcagaagcag acacctccag tgaactagca aagaaaagca 60
aagaagtatt cagaaaagag atgtcccagt tcatcgcca gtgcctgaac cttaccgga 120
aacctgactg caaagtggga agaattacca caactgaaga ctttaaacat ctggctcgca 180
agctgactca cgggtgttatg aataaggagc tgaagtactg taagaatcct gaggacctgg 240
agtgcattga gaatgtgaaa cacaaaacca aggantacat taanaagtac atgcannan 300
tttggggcctt g 311

<210> 345

<211> 201

<212> DNA

<213> Homo sapiens

<400> 345

cacacggtca tcccgactgc caacctggag gcccaggecc tgtggaagga gccgggcagc 60
aatgtcacca tgagtgtgga tgctgagtgt gtgccatgg tcaggacct tctcaggtac 120
ttctactccc gaaggattga catcacctg tctcagtc aagtgttcca caagctggcc 180
tctgcctatg gggccaggca g 201

<210> 346
<211> 370
<212> DNA
<213> Homo sapiens

<400> 346
ctgctccagg gcggtggtgtg ccttcgtggc ctctgcctcc tccgaggagc caggctgtgt 60
tctcttcaga atgttctgga gcagcagttt gaggcgggtg atgcgttgga agggcagaat 120
cagaaaggac ttgagggaaa ggcgctggca gacggggctg ctctccagct tctccaagac 180
ctcccggaaa ttgctgttgc tattcatcag gctctggaag gtgcgttcct gataggtctg 240
gttggtgaca taaggcaggt agacccggcg gaagtctggg gcgtggttca ggactacgtc 300
acatacttgg aaggagaaga tattgttctc aaagttctct tccaggtctg aaaggaacgt 360
ggcgtgacg 370

<210> 347
<211> 416
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(416)
<223> n = A,T,C or G

<400> 347
ctgttgtgct gtgtatggac gtgggcttta ccatgagtaa ctccattcct ggtatagaat 60
ccccatttga acaagcaaag aaggtgataa ccatgtttgt acagcgacag gtgtttgctg 120
agaacaagga tgagattgct ttagtcctgt ttggtacaga tggcactgac aatccccctt 180
ctggtgggga tcagtatcag aacatcacag tgcacagaca tctgatgcta ccagattttg 240
atttgctgga ggacattgaa agcaaaatcc aaccagggtc tcaacaggct gacttcctgg 300
atgcactaat cgtgagcatg gatgtgattc aacatgaaac aataggaaaag aagtttggag 360
aagaggcata ttgaaatatt cactgacctc aagcagcccg attcagcaaa agtcan 416

<210> 348
<211> 351
<212> DNA
<213> Homo sapiens

<400> 348
gtacaggaga ggatggcagg tgcagagcgg gcactgagct ctgcagggtga aagggctcgg 60
cagttggatg ctctcctgga ggctctgaaa ttgaaacggg caggaaatag tctggcagcc 120
tctacagcag aagaaacggc aggcagtgcc cagggacgag caggagacag atgccttcct 180
cttgtctcaa ctgcaaagag gcgttccttc ctctttcact aatcctcctc agcacagacc 240
ctttacgggt gtcaggctgg gggacagtaa ggtctttccc ttcccacaag gccatatctc 300
aggctgtctc agtgggggga aaccttggac aatacccggt ctttcttggg c 351

<210> 349
<211> 207
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(207)
<223> n = A,T,C or G

<400> 349

```
nccgggacat ctccaccctc aacagtggca agaagagcct ggagactgaa cacaaggcct 60
tgaccagtga gattgcactg ctgcagtcca ggctgaagac agagggctct gatctgtgcg 120
acagagtgag cgaaatgcag aagctggatg cacaggtcaa ggagctggtg ctgaagtcgg 180
cgggtggaggc tgagcgcctg gtggctg                                     207
```

<210> 350

<211> 323

<212> DNA

<213> Homo sapiens

<400> 350

```
ccatacaggg ctgttgccca ggccctagag gtcattcctc gtaccctgat ccagaactgt 60
ggggccagca ccatccgtct acttacctcc cttcggggcca agcacacca ggagaactgt 120
gagacctggg gtgtaaatgg tgagacgggt actttggtgg acatgaagga actgggcata 180
tgggagccat tggctgtgaa gctgcagact tataagacag cagtggagac ggcagttctg 240
ctactgcgaa ttgatgacat cgtttcaggg cacgaaaaga aaggcgatga ccagagccgg 300
caaggcgggg ctctgtatgc tgg                                     323
```

<210> 351

<211> 353

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(353)

<223> n = A,T,C or G

<400> 351

```
cgccgcaccc cntggtcctt tccantccct tttcccttnt cngggaaact gtatgcgggt 60
tgtttttgtt ttgtagggtt tttttccttc tccacctctc cctgtctctt ttgctccatg 120
ttgtccggtt ctgtgggggt aggtttatgt ttttaatcat ctgaggtcac gtctatttcc 180
tccggactcg cctgcttggt ggcgattctc caccgggtta tatggtgcgt cccttttttc 240
ttttgttgcg aatctgagcc ttcttccctc agcttctgcc ttttgaactt tgttcttcgg 300
ttctgaaacc atacttttac ctgagtttcc gtgaggctga ggctgtgtgc caa          353
```

<210> 352

<211> 467

<212> DNA

<213> Homo sapiens

<400> 352

```
ctgcccacac tgatcacttg cgagatgtcc ttaggggtaca agaacaggaa ttgaagtctg 60
aatttgagca gaacctgtct gagaaactct ctgaacaaga attacaattt cgctcgtctca 120
gtcaagagca agttgacaac ttactcttgg atataaatac tgcctatgcc agactcagag 180
gaatcgaaca ggctgttcag agccatgcag ttgctgaaga ggaagccaga aaagcccacc 240
aactctgggt ttcatgtggag gcattaaagt acagcatgaa gacctcatct gcagaaacac 300
ctactatccc gctgggtagt gcagttgagg ccatcaaagc caactgttct gataatgaat 360
tcacccaagc tttaaccgca gctatccctc cagagtcctt gaccctgggg gtgtacagtg 420
aagagaccct tagagcccgt ttctatgctg ttcaaaaact ggcccga          467
```

<210> 353

<211> 350

<212> DNA

<213> Homo sapiens

<400> 353

```
ctgctgcagc cacagtagtt cctcccatgg tgggtggccc tcttggtcct gctggcccag 60
gaaatctgtc cccaccagga acagcccctg gaaaacggcc ccgtcctcta ccaccttggtg 120
gaaatgctgc acgggaactg cctcctggag gaccagcttt accttcccca gacatttgctc 180
ctgattgtgt agttttcctg gactgcattt caaattgact caggaactgt ttattgcatg 240
gagttacaac aggattctga ccatgaagtt ctcttttagg taacagatcc attaactttt 300
ttgaagatgc ttcagatcca acaccaacaa gggcaaacc ctttgactgg 350
```

<210> 354

<211> 351

<212> DNA

<213> Homo sapiens

<400> 354

```
atthagatga gatctgaggg atggagacat ggagacagta tacagactcc tagatttaag 60
ttttagggtt tttgcttttc taatcaccaa ttcttatata caatgtatat tttagactcg 120
agcagatgat catcttcac ttaagtcatt ccttttgact gagtatggca ggattagagg 180
gaatggcagt atagatcaat gtctttttct gtaaagtata ggaaaaacca gagaggaaaa 240
aaagagctga caattggaag gtagtagaaa attgacgata atttcttctt aacaaataat 300
agttgtatat acaaggaggc tagtcaacca gattttattt gttgagggcg a 351
```

<210> 355

<211> 308

<212> DNA

<213> Homo sapiens

<400> 355

```
ttttggcgca agttttacag attttattaa agtcgaagct attggtcttg gaagatgaaa 60
atgcaaagt t gatgaggtg gaattgaagc cagatacctt aataaaatta tatcttggtt 120
ataaaaaata gaaattaagg gttaacatca atgtgccaat gaaaaccgaa cagaagcagg 180
aacaagaaac cacacacaaa aacatcgagg aagaccgcaa actactgatt caggcggcca 240
tcgtgagaat catgaagatg aggaagggtc tgaaacacca gcagttactt ggcgaggtcc 300
tcactcag 308
```

<210> 356

<211> 207

<212> DNA

<213> Homo sapiens

<400> 356

```
ctgtcccaag tgctcccaga aggcaggatt ctgaagacca ctccagcgat atgttcaact 60
atgaagaata ctgcaccgcc aacgcagtca ctgggccttg ccgtgcatcc ttcccacgct 120
ggtactttga cgtggagagg aactcctgca ataacttcat ctatggaggc tgccggggca 180
ataagaacag ctaccgctct gaggagg 207
```

<210> 357

<211> 188

<212> DNA

<213> Homo sapiens

<220>

<221> .misc_feature

<222> (1)...(188)

<223> n = A,T,C or G

<400> 357

```
tcgaccacgc cctcgtagcg catgngctnc aggacgatgc tcagagtgat gaacacccccg 60
gtgcggccca cgccagcact gcagtgcacc gtgataggcc catcctgtcc aaactgctcc 120
ttggtcttat gcacctgccc gatgaagtca atgaatccct cgctgtctt gggcacgccc 180
tgctctgg                                     188
```

<210> 358

<211> 291

<212> DNA

<213> Homo sapiens

<400> 358

```
ctgggagcat cggcaagcta ctgccttaaa atccgatctc cccgagtgca caatttctgt 60
cccttttaag ggttcacaac actaaagatt tcacatgaaa gggttgtgat tgatttgagc 120
aggcaggcgg tacgtgacag gggctgcatg caccggtggt cagagagaaa cagaacaggg 180
caggggaattt cacaatgttc ttctatacaa tggctggaat ctatgaataa catcagtttc 240
taagttatgg gttgattttt aactactggg tttaggccag gcaggcccag g 291
```

<210> 359

<211> 117

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(117)

<223> n = A,T,C or G

<400> 359

```
gccaccacac tccagcctgg gcaatacagc aagactgtct caaaaaaaaaa aaaaaaaaaa 60
cccaaaaaaa ctcaaaaang taatgaatga tacccaangn gccttttcta gaaaaag 117
```

<210> 360

<211> 394

<212> DNA

<213> Homo sapiens

<400> 360

```
ctgttcctct ggggtggtcc agttctagag tgggagaaaag ggagtcaggc gcattgggaa 60
tcgtggttcc agtctggttg cagaatctgc acatttgcca agaaattttc cctgtttgga 120
aagtttgccc cagctttccc gggcacacca ctttttgccc caagtgtctg ccggtcgacc 180
aatctgcctg ccacacattg accaagccag acccggttca cccagctcga ggatcccagg 240
ttgaagagtg gcccttgag gccctggaaa gaccaatcac tggacttctt cccttgagag 300
tcagaggtea cccgtgatcc tgccctgcacc ttatcattga tctgcagtga tttctgcaaa 360
tcaagagaaa ctctgcaggg cactcccctg tttc                                     394
```

<210> 361

<211> 394

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature
<222> (1)...(394)
<223> n = A,T,C or G

<400> 361

```
ctgggcggat agcaccgggc atattttntt natggatgag gtctggcacc ctgagcagtc 60
cagcgaggac ttggtcttag ttgagcaatt tggctaggag gatagtatgc agcacggttc 120
tgagtctgtg ggatagctgc catgaagtaa cctgaaggag gtgctggctg gtaggggttg 180
attacagggg tgggaacagc tcgtacactt gccattctct gcatatactg gttagtggag 240
tgagcctggc gctcttcttt gcgctgagct aaagctacat acaatggctt tgtggacctc 300
ggccgcgacc acgctaagcc gaattccagc acactggcgg ccgttactag tggatccgag 360
ctcggtagca agcttggcgt aatcatggtc atag 394
```

<210> 362
<211> 268
<212> DNA
<213> Homo sapiens

<400> 362

```
ctgcgcgtgg accagtcagc ttccgggtgt gactggagca gggcttgctg tcttcttcag 60
agtcactttg caggggttg tgaagctgct cccatccatg tacagctccc agtctactga 120
tgtttaagga tgggtctcggg ggtagggccc actagaataa actgagtcca atacctctac 180
acagttatgt ttaactgggc tctctgacac cgggaggaag gtggcggggg ttaggtgttg 240
caaacttcaa tggttatgcg gggatgtt 268
```

<210> 363
<211> 323
<212> DNA
<213> Homo sapiens

<400> 363

```
ccttgacctt ttcagcaagt gggaagggtgt aatccgtctc cacagacaag gccaggactc 60
gtttgtaccc gttgatgata gaatggggta ctgatgcaac agttgggtag ccaatctgca 120
gacagacact ggcaacattg cggacaccct ccaggaagcg agaatgcaga gtttcctctg 180
tgatatcaag cacttcaggg ttgtagatgc tgccattgtc gaacacctgc tggatgacca 240
gccc aaagga gaagggggag atgttgagca tgttcagcag cgtggcttcg ctggctccca 300
ctttgtctcc agtcttgatc aga 323
```

<210> 364
<211> 393
<212> DNA
<213> Homo sapiens

<220>

<221> misc_feature
<222> (1)...(393)
<223> n = A,T,C or G

<400> 364

```
ccaagctctc catcgctccc gtgcgcagng gctactgggg gaacaagatc ggcaagcccc 60
acactgtccc ttgcaagggt acaggccgct gcggctctgt gctggtagcg ctcatcactg 120
caccagggg cactggcacc gtctccgcac ctgtgcctaa gaagctgctc atgatggctg 180
gcatcgatga ctgctacacc tcagccccgg gctgcactgc caccctgggc aacttcgcca 240
aggccacctt tgatgccatt tctaagacct acagctacct gacccccgac ctctggaagg 300
agactgtatt caccaagtct ccctatcagg agttcactga ccacctcgtc aagaccacca 360
```

ccagagtctc cgtgcagcgg actcaggctc cag

393

<210> 365

<211> 371

<212> DNA

<213> Homo sapiens

<400> 365

cctcctcaga gcggtagctg ttcttattgc cccggcagcc tccatagatg aagttattgc 60
aggagttcct ctccacgtca aagtaccagc gtgggaagga tgcacggcaa ggcccagtga 120
ctgcgttggc ggtgcagtat tcttcatagt tgaacatata gctggagtgg tcttcagaat 180
cctgccttct gggagcactt gggacagagg aatccgctgc attcctgctg gtggacctcg 240
gccgcgacca cgctaagccg aattccagca cactggcggc cgttactagt ggatccgagc 300
tcggtaccaa gcttggcgta atcatggtca tagctgtttc ctgtgtgaaa ttgttatccg 360
ctcacaaattc c 371

<210> 366

<211> 393

<212> DNA

<213> Homo sapiens

<400> 366

atttcttgcc agatgggagc tctttggtga agactccttt cgggaaaagt tttttggctt 60
cttcttcagg gatggttgga aggaccatca cactatcccc atccttccaa tcaactgggg 120
tggcaaccct tttttctgct gtcagctgga gagagatgac taccctgaga atctcatcaa 180
agtctctgcc agtggtagct gggtagagga tagacagctt cagcttctta tcaggaccaa 240
aaacaaacac cacacgagct gccacaggca tgcccttttc atccttctct gctggatcca 300
gcatgcccaa caggatggca agctcccgat tcctatcctc gatgatggga aaaggtaact 360
tttctgtggg ctcttcacaa ttgtaagcat tga 393

<210> 367

<211> 327

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(327)

<223> n = A,T,C or G

<400> 367

ccagctctgt ctcatacttg actctaaagt cttnagcagc aagacgggca ttgnnaatct 60
gcagaacgat gcgggcattg tccacagtat ttgcgaagat ctgagccctc aggtcctcga 120
tgatcttgaa gtaatggctc cagtctctga cctgggggtcc cttcttctcc aagtgtctcc 180
ggattttgct ctccagcctc cggttctcgg tctccaggct cctcactctg tccaggtaag 240
aggccaggcg gtcgttcagg ctttgcatgg tctccttctc gttctggatg cctcccatcc 300
ctgccagacc cccggctatc ccggtgg 327

<210> 368

<211> 306

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(306)

<223> n = A,T,C or G

<400> 368

```

ctggagaagg acttcagcag tttnaagaag tactgccaaag tcatccgtgt cattgcccac 60
accagatgc gcctgcttcc tctgcgccag aagaaggccc acctgatgga gatccagggtg 120
aacggaggca ctgtggccga gaagctggac tgggcccgcg agaggcttga gcagcaggta 180
cctgtgaacc aagtgtttgg gcaggatgag atgatcgacg tcatcggggt gaccaagggc 240
aaaggctaca aaggggtcac cagtcgttgg cacaccaaga agctgccccg caagaccac 300
cgagga                                           306

```

<210> 369

<211> 394

<212> DNA

<213> Homo sapiens

<400> 369

```

tcgaccacaca ccggaacacg gagagctggg ccagcattgg cacttgatag gatttcccgt 60
cggctgccac gaaagtgcgt ttctttgtgt tctcgggttg gaaccgtgat ttccacagac 120
ccttgaaata cactgcgttg acgaggacca gtctgggtgag cacacocatca ataagatctg 180
gggacagcag attgtcaatc atatccctgg ttctattttt aacccatgca ttgatggaat 240
cacaggcaga ggctggatcc tcaaagttca cattccggac ctacactgg aacacatctt 300
tgttccttgt aacaaaaggc acttcaattt cagaggcatt ctaacaaac acggcgttag 360
ccactgtcac aatgtcttta ttcttcttgg agac                                           394

```

<210> 370

<211> 653

<212> DNA

<213> Homo sapiens

<400> 370

```

ccaccacacc caattccttg ctggtatcat ggcagccgcc acgtgccagg attaccggct 60
acatcatcaa gtatgagaag cctgggtctc ctcccagaga agtgggtccct cggccccgcc 120
ctggtgtcac agaggctact attactggcc tggaaaccggg aaccgaatat acaatttatg 180
tcattgccct gaagaataat cagaagagcg agcccctgat tggaaaggaaa aagacagacg 240
agcttcccca actggttaacc cttccacacc ccaatcttca tggaccagag atcttggatg 300
ttccttccac agttcaaaaag acccctttcg taccacacc tgggtatgac actggaaatg 360
gtattcagct tcctggcact tctggtcagc aaccagtggt tgggcaacaa atgatctttg 420
aggaacatgg ttttaggcgg accacaccgc ccacaacggc ccccccata aggcataaggc 480
caagaccata cccgccgaat gtaggacaag aagctctctc tcagacaacc atctcatggg 540
ccccattcca ggacacttct gagtacatca ttctatgtca tcctgttggc actgatgaag 600
aacccttaca gttcaggggt cctggaactt ctaccagtgc cactctgaca gga                                           653

```

<210> 371

<211> 268

<212> DNA

<213> Homo sapiens

<400> 371

```

ctgcccagcc cccattggcg agtttgagaa ggtgtgcagc aatgacaaca agaccttcga 60
ctcttctcgc cacttctttg ccacaaagtg caccctggag ggcaccaaga agggccacaa 120
gctccacctg gactacatcg ggcttgcaa atacatccc ccttgccctgg actctgagct 180
gaccgaattc cccctgcgca tgcgggactg gctcaagaac gtccctgggtca ccctgtatga 240
gagggatgag gacaacaacc ttctgact                                           268

```

<210> 372
<211> 392
<212> DNA
<213> Homo sapiens

<400> 372
gctggtgccc ctggtgaacg tggacctcct ggattggcag gggccccagg acttagaggt 60
ggaactggtc cccctggtcc cgaaggagga aagggtgctg ctggtcctcc tgggccacct 120
ggtgctgctg gtactcctgg tctgcaagga atgcctggag aaagaggagg tcttggaagt 180
cctggtccaa agggtgacaa ggggtaacca ggcggtccag gtgctgatgg tgtcccagg 240
aaagatggcc caaggggtcc tactggtcct attggtcctc ctggcccagc tggccagcct 300
ggagataagg gtgaagggtg tgcctccgga cttccaggta tagctggacc tcgtggtagc 360
cctggtgaga gaggtgaaac ctgcggccgcg ac 392

<210> 373
<211> 388
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(388)
<223> n = A,T,C or G

<400> 373
ccaagcgctc agatcggcaa ggggcaccan ttttgatctg ccagtgac agccccacaa 60
ccaggtcagc gatgaaggta tcttcagtct ccccgaaacg atgagacacc atgacgcccc 120
aaccattggc ctgggccagc ttgcacgcct gaagagactc ggtcacggag ccaatctggt 180
tgactttgag caggaggcag ttgcaggact tctcgttcac ggccttggcg atcctctttg 240
ggttggtcac tgtgagatca tccccacta cctggattcc tgcactggtt gtgaacttct 300
gccaaagctc ccagtcaccc tgggtcaaagg gatcttcgat agacaccact gggtagtcct 360
tgatgaagga cttgtacagg tcagccag 388

<210> 374
<211> 393
<212> DNA
<213> Homo sapiens

<400> 374
ctgacgaccg cgtgaacccc tgcattgggg gtgtcactct cttccatgag acactctacc 60
agaaggcgga tgatgggcgt cccttcccc aagttatcaa atccaagggc ggtggtgtgg 120
gcatcaaggc agacaaggc gtggtcccc tggcaggac aaatggcgag actaccaccc 180
aagggttggg tgggctgtct gagcgctgtg ccagtagcaa gaaggacgga gctgacttcg 240
ccaagtggcg ttgtgtgctg aagattgggg aacacacccc ctcagccctc gccatcatgg 300
aaaatgccaa tgttctggcc cgttatgccg gtatctgccg gcagaatggc attgtgcccc 360
tcgtggagcc tgagatcctc cctgatgggg acc 393

<210> 375
<211> 394
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(394)

<223> n = A,T,C or G

<400> 375

```
ccacaaatgg cgtgggtccat gtcattcacen ttntttctgca gcctccagcc aacagacctc 60
aggaaagagg ggatgaactt gcagactctg cgcttgagat cttcaaaca gcatcagcgt 120
tttccagggc ttcccagagg tctgtgagac tagccctgt ctatcaaaag ttattagaga 180
ggatgaagca ttagcttgaa gcactacagg aggaatgcac cacggcagct ctccgccaat 240
ttctctcaga ttccacaga gactgtttga atgttttcaa aaccaagtat cacacttta 300
tgtacatggg ccgcaccata atgagatgtg agccttgtgc atgtggggga ggaggagag 360
agatgtactt tttaaactcat gttcccccta aaca 394
```

<210> 376

<211> 392

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(392)

<223> n = A,T,C or G

<400> 376

```
ctgcccagcc cccattggcg agtttgattn ggtgtgcagc aatgacaaca agaccttcga 60
ctcttctctg cacttctttg ccacaaagtg caccctggag ggacccaaga agggccacaa 120
gctccacctg gactacatcg ggcttgcaa atacatcccc ccttgccctg actctgagct 180
gaccgaattc cccctgcgca tgcgggactg gctcaagaac gtcctggtea cctgttatga 240
gagggatgag gacaacaacc ttctgactga gaagcagaag ctgcggtgga agaagatcca 300
tgagaatgag aagcgctctg aggcaggaga ccacccctg gagctgctgg cccgggactt 360
cgagaagaac tataacatgt acatcttccc tg 392
```

<210> 377

<211> 292

<212> DNA

<213> Homo sapiens

<400> 377

```
caatgtttga tgcttaaccc ccccaatttc tgtgagatgg atggccagtg caagcgtgac 60
ttgaagtgtt gcatgggcat gtgtgggaaa tcttgcgttt cccctgtgaa agcttgattc 120
ctgccatatg gaggaggctc tggagtcctg ctctgtgtgg tccaggctct ttccaccctg 180
agacttggct ccaccactga tatcctcctt tggggaaaagg cttggcacac agcaggcttt 240
caagaagtgc cagttgatca atgaataaat aaacgagcct atttctcttt gc 292
```

<210> 378

<211> 395

<212> DNA

<213> Homo sapiens

<400> 378

```
ctgctgcttc agcgaagggt ttctggcata tccaatgata aggctgccaa agactgttcc 60
aataccagca ccagaaccag ccactcctac tgttgagca cctgcaccaa taaatttggc 120
agcagtatca atgtctctgc tgattgcact ggtctgaaac tcccttttga ttagctgaga 180
cacaccattc tgggcctga ttttcctaag atagaactcc aactctttgc cctctagcac 240
atagccatct gctcgccac actgtcccgg ccttgaagcg atgcacgcaa gaagcttgcc 300
ctgctggaac tgctcctcca ggagactgct gattttggca ttctttttcc ttcatcata 360
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<210> 379
<211> 223
<212> DNA
<213> Homo sapiens

<400> 379
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tggttccagc ccacctgccc tccccttttt cgggactctg tattccctct tgggctgacc 180
acagcttctc cctttcccaa ccaataaagt aaccactttc agc 223

<210> 380
<211> 317
<212> DNA
<213> Homo sapiens

<220>
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<223> n = A,T,C or G

<400> 380
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attccgcagg ggccctcctc gccaaagaca gcctagagag gacggcaatg aagaagataa 180
agaaaatcaa ggagatgaga cccaaggta gcagccacct caacgtcgt accgccgcaa 240
cttcaattac cgacgcagac gcccgaaaa ccctaaacca caagatggca aagagacaaa 300
agcagccgat ccaccag 317

<210> 381
<211> 392
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(392)
<223> n = A,T,C or G

<400> 381
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caagatcctg agtgacatgc gaagccaata tgaggtcatg gccgagcaga accggaagga 180
tgctgaagcc tggttcacca gccggactga agaattgaac cgggaggtcg ctggccacac 240
ggagcagctc cagatgagca ggtccgaggt tactgacctg cggcgacccc ttcagggctc 300
tgagattgag ctgcagtcac agacctcggc cgcgaccacg ctaagccgaa ttccagcaca 360
ctggcgggccg ttactagtgg atccgagctc gg 392

<210> 382
<211> 234
<212> DNA
<213> Homo sapiens

<400> 382

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ccgcgacttc gttcaggtac atgaagagct ccaaggagggt ctgggtgggtg gtgccatcct 180
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```

<210> 383

<211> 396

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(396)

<223> n = A,T,C or G

<400> 383

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gacagacact ggcaacattg cggacaccca ggatttcaat ggtgcccctg gagatttttag 180
tggtgatacc taaagcctgg aaaaaggagg tcttctcggg cccgagacca gtgttctggg 240
ctggcacagt gacttcacat ggggcaatgg caccagcacg ggcagcagac ctgcccgggc 300
ggccgctcga aagccgaatt ccagcacact ggcggccggt actagtggat ccgagctcgg 360
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<210> 384

<211> 396

<212> DNA

<213> Homo sapiens

<400> 384

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<210> 385

<211> 2943

<212> DNA

<213> Homo sapiens

<400> 385

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tctggctgca gactgacttt gtcaggcct gaaaaggatg ggacagccac tggagtggat 480
gccatctgca cccaccacc tgaccccaaa agccctaggc tggacagaga gcagctgtat 540
tgggagctga gccagctgac ccacaatatc actgagctgg gccctatgc cctggacaac 600
gacagcctct ttgtcaatgg tttcactcat cggagctctg tgtccaccac cagcactcct 660

```



```

gggacccccca cagtgtatct gggagcatct aagactccag cctcgatatt tggcccttca 720
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<210> 386

<211> 2608

<212> DNA

<213> Homo sapiens

<400> 386

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aagccctagg ctggacagag agcagctgta ttgggagctg agccagctga ccacaatat 180
cactgagctg ggccctatg cctggacaa cgacagcctc tttgtcaatg gtttactca 240
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cctcaacttc accatcacta acctgcggta tgaggagaac atgtggcctg gctccaggaa 420
gttcaacact acagagaggg tcttcaggg cctgctaagg cccttggtca agaaccag 480
tgttgccct ctgtactctg gctgcaggct gacctgtctc aggccagaga aagatgggga 540

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2608

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<210> 387

<211> 1761

<212> DNA

<213> .Homo sapiens

<400> 387

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caatccgggg cgagtaccag ataaatttcc acattgtcaa ctggaacctc agtaatccag 780

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acccacatc ctcagagtac atcacctgc tgagggacat ccaggacaag gtcaccacac 840
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<210> 388

<211> 772

<212> PRT

<213> Homo sapiens

<400> 388

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          20                      25                      30

Asn Leu Val Pro Arg Leu Pro Ala Leu Ser Trp Cys Tyr Ser Leu Ser
          35                      40                      45

Thr Ser Pro Ser Pro Thr Cys Gly Met Arg Arg Thr Cys Ser Thr Leu
          50                      55                      60

Ala Pro Gly Ser Ser Thr Pro Arg Arg Gly Ser Phe Arg Ala Trp Ser
          65                      70                      75                      80

Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu
          85                      90                      95

Thr Leu Leu Arg Pro Glu Lys Asp Gly Thr Ala Thr Gly Val Asp Ala
          100                     105                     110

Ile Cys Thr His His Pro Asp Pro Lys Ser Pro Arg Leu Asp Arg Glu
          115                     120                     125

Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr His Asn Ile Thr Glu Leu
          130                     135                     140

Gly Pro Tyr Ala Leu Asp Asn Asp Ser Leu Phe Val Asn Gly Phe Thr
          145                     150                     155                     160

His Arg Ser Ser Val Ser Thr Thr Ser Thr Pro Gly Thr Pro Thr Val

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180	185	190
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195	200	205
Leu Arg Tyr Glu Glu Asn Met Trp Pro Gly Ser Arg Lys Phe Asn Thr		
210	215	220
Thr Glu Arg Val Leu Gln Gly Leu Leu Arg Pro Leu Phe Lys Asn Thr		
225	230	235
Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro		
245	250	255
Glu Lys Asp Gly Glu Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg		
260	265	270
Pro Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu Gln Leu Tyr Leu Glu		
275	280	285
Leu Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu		
290	295	300
Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val		
305	310	315
Pro Thr Thr Ser Thr Gly Val Val Ser Glu Glu Pro Phe Thr Leu Asn		
325	330	335
Phe Thr Ile Asn Asn Leu Arg Tyr Met Ala Asp Met Gly Gln Pro Gly		
340	345	350
Ser Leu Lys Phe Asn Ile Thr Asp Asn Val Met Lys His Leu Leu Ser		
355	360	365
Pro Leu Phe Gln Arg Ser Ser Leu Gly Ala Arg Tyr Thr Gly Cys Arg		
370	375	380
Val Ile Ala Leu Arg Ser Val Lys Asn Gly Ala Glu Thr Arg Val Asp		
385	390	395
Leu Leu Cys Thr Tyr Leu Gln Pro Leu Ser Gly Pro Gly Leu Pro Ile		
405	410	415
Lys Gln Val Phe His Glu Leu Ser Gln Gln Thr His Gly Ile Thr Arg		
420	425	430
Leu Gly Pro Tyr Ser Leu Asp Lys Asp Ser Leu Tyr Leu Asn Gly Tyr		
435	440	445
Asn Glu Pro Gly Pro Asp Glu Pro Pro Thr Thr Pro Lys Pro Ala Thr		
450	455	460

Thr Phe Leu Pro Pro Leu Ser Glu Ala Thr Thr Ala Met Gly Tyr His
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 485 490 495
 Pro Asp Met Gly Lys Gly Ser Ala Thr Phe Asn Ser Thr Glu Gly Val
 500 505 510
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 Phe Tyr Leu Gly Cys Gln Leu Ile Ser Leu Arg Pro Glu Lys Asp Gly
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 545 550 555 560
 Gly Pro Gly Leu Asp Ile Gln Gln Leu Tyr Trp Glu Leu Ser Gln Leu
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 580 585 590
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 625 630 635 640
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 Cys Leu Val Thr Asn Leu Thr Met Asp Ser Val Leu Val Thr Val Lys
 660 665 670
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 675 680 685
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 690 695 700
 Gln Leu Val Asp Ile His Val Thr Glu Met Glu Ser Ser Val Tyr Gln
 705 710 715 720
 Pro Thr Ser Ser Ser Ser Thr Gln His Phe Tyr Leu Asn Phe Thr Ile
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 740 745 750

Tyr Gln Arg Asn Lys Arg Asn Ile Glu Asp Ala Ala Pro His Arg Gly
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Gly Leu Pro Val
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<210> 389

<211> 833

<212> PRT

<213> Homo sapiens

<400> 389

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Cys Thr His His Pro Asp Pro Lys Ser Pro Arg Leu Asp Arg Glu Gln
 35 40 45

Leu Tyr Trp Glu Leu Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly
 50 55 60

Pro Tyr Ala Leu Asp Asn Asp Ser Leu Phe Val Asn Gly Phe Thr His
 65 70 75 80

Arg Ser Ser Val Ser Thr Thr Ser Thr Pro Gly Thr Pro Thr Val Tyr
 85 90 95

Leu Gly Ala Ser Lys Thr Pro Ala Ser Ile Phe Gly Pro Ser Ala Ala
 100 105 110

Ser His Leu Leu Ile Leu Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu
 115 120 125

Arg Tyr Glu Glu Asn Met Trp Pro Gly Ser Arg Lys Phe Asn Thr Thr
 130 135 140

Glu Arg Val Leu Gln Gly Leu Leu Arg Pro Leu Phe Lys Asn Thr Ser
 145 150 155 160

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu
 165 170 175

Lys Asp Gly Glu Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg Pro
 180 185 190

Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu Gln Leu Tyr Leu Glu Leu
 195 200 205

Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp
 210 215 220

Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Pro
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 Thr Thr Ser Thr Gly Val Val Ser Glu Glu Pro Phe Thr Leu Asn Phe
 245 250 255
 Thr Ile Asn Asn Leu Arg Tyr Met Ala Asp Met Gly Gln Pro Gly Ser
 260 265 270
 Leu Lys Phe Asn Ile Thr Asp Asn Val Met Lys His Leu Leu Ser Pro
 275 280 285
 Leu Phe Gln Arg Ser Ser Leu Gly Ala Arg Tyr Thr Gly Cys Arg Val
 290 295 300
 Ile Ala Leu Arg Ser Val Lys Asn Gly Ala Glu Thr Arg Val Asp Leu
 305 310 315 320
 Leu Cys Thr Tyr Leu Gln Pro Leu Ser Gly Pro Gly Leu Pro Ile Lys
 325 330 335
 Gln Val Phe His Glu Leu Ser Gln Gln Thr His Gly Ile Thr Arg Leu
 340 345 350
 Gly Pro Tyr Ser Leu Asp Lys Asp Ser Leu Tyr Leu Asn Gly Tyr Asn
 355 360 365
 Glu Pro Gly Pro Asp Glu Pro Pro Thr Thr Pro Lys Pro Ala Thr Thr
 370 375 380
 Phe Leu Pro Pro Leu Ser Glu Ala Thr Thr Ala Met Gly Tyr His Leu
 385 390 395 400
 Lys Thr Leu Thr Leu Asn Phe Thr Ile Ser Asn Leu Gln Tyr Ser Pro
 405 410 415
 Asp Met Gly Lys Gly Ser Ala Thr Phe Asn Ser Thr Glu Gly Val Leu
 420 425 430
 Gln His Leu Leu Arg Pro Leu Phe Gln Lys Ser Ser Met Gly Pro Phe
 435 440 445
 Tyr Leu Gly Cys Gln Leu Ile Ser Leu Arg Pro Glu Lys Asp Gly Ala
 450 455 460
 Ala Thr Gly Val Asp Thr Thr Cys Thr Tyr His Pro Asp Pro Val Gly
 465 470 475 480
 Pro Gly Leu Asp Ile Gln Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr
 485 490 495
 His Gly Val Thr Gln Leu Gly Phe Tyr Val Leu Asp Arg Asp Ser Leu
 500 505 510
 Phe Ile Asn Gly Tyr Ala Pro Gln Asn Leu Ser Ile Arg Gly Glu Tyr

515	520	525
Gln Ile Asn Phe His Ile Val Asn Trp Asn Leu Ser Asn Pro Asp Pro		
530	535	540
Thr Ser Ser Glu Tyr Ile Thr Leu Leu Arg Asp Ile Gln Asp Lys Val		
545	550	555
Thr Thr Leu Tyr Lys Gly Ser Gln Leu His Asp Thr Phe Arg Phe Cys		
	565	570
Leu Val Thr Asn Leu Thr Met Asp Ser Val Leu Val Thr Val Lys Ala		
	580	585
Leu Phe Ser Ser Asn Leu Asp Pro Ser Leu Val Glu Gln Val Phe Leu		
	595	600
Asp Lys Thr Leu Asn Ala Ser Phe His Trp Leu Gly Ser Thr Tyr Gln		
	610	615
Leu Val Asp Ile His Val Thr Glu Met Glu Ser Ser Val Tyr Gln Pro		
	625	630
Thr Ser Ser Ser Ser Thr Gln His Phe Tyr Leu Asn Phe Thr Ile Thr		
	645	650
Asn Leu Pro Tyr Ser Gln Asp Lys Ala Gln Pro Gly Thr Thr Asn Tyr		
	660	665
Gln Arg Asn Lys Arg Asn Ile Glu Asp Ala Leu Asn Gln Leu Phe Arg		
	675	680
Asn Ser Ser Ile Lys Ser Tyr Phe Ser Asp Cys Gln Val Ser Thr Phe		
	690	695
Arg Ser Val Pro Asn Arg His His Thr Gly Val Asp Ser Leu Cys Asn		
	705	710
Phe Ser Pro Leu Ala Arg Arg Val Asp Arg Val Ala Ile Tyr Glu Glu		
	725	730
Phe Leu Arg Met Thr Arg Asn Gly Thr Gln Leu Gln Asn Phe Thr Leu		
	740	745
Asp Arg Ser Ser Val Leu Val Asp Gly Tyr Phe Pro Asn Arg Asn Glu		
	755	760
Pro Leu Thr Gly Asn Ser Asp Leu Pro Phe Trp Ala Val Ile Leu Ile		
	770	775
Gly Leu Ala Gly Leu Leu Gly Leu Ile Thr Cys Leu Ile Cys Gly Val		
	785	790
Leu Val Thr Thr Arg Arg Arg Lys Lys Glu Gly Glu Tyr Asn Val Gln		
	805	810
		815

Gln Gln Cys Pro Gly Tyr Tyr Gln Ser His Leu Asp Leu Glu Asp Leu
 820 825 830

Gln

<210> 390

<211> 438

<212> PRT

<213> Homo sapiens

<400> 390

Met Gly Tyr His Leu Lys Thr Leu Thr Leu Asn Phe Thr Ile Ser Asn
 5 10 15

Leu Gln Tyr Ser Pro Asp Met Gly Lys Gly Ser Ala Thr Phe Asn Ser
 20 25 30

Thr Glu Gly Val Leu Gln His Leu Leu Arg Pro Leu Phe Gln Lys Ser
 35 40 45

Ser Met Gly Pro Phe Tyr Leu Gly Cys Gln Leu Ile Ser Leu Arg Pro
 50 55 60

Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Thr Thr Cys Thr Tyr His
 65 70 75 80

Pro Asp Pro Val Gly Pro Gly Leu Asp Ile Gln Gln Leu Tyr Trp Glu
 85 90 95

Leu Ser Gln Leu Thr His Gly Val Thr Gln Leu Gly Phe Tyr Val Leu
 100 105 110

Asp Arg Asp Ser Leu Phe Ile Asn Gly Tyr Ala Pro Gln Asn Leu Ser
 115 120 125

Ile Arg Gly Glu Tyr Gln Ile Asn Phe His Ile Val Ash Trp Asn Leu
 130 135 140

Ser Asn Pro Asp Pro Thr Ser Ser Glu Tyr Ile Thr Leu Leu Arg Asp
 145 150 155 160

Ile Gln Asp Lys Val Thr Thr Leu Tyr Lys Gly Ser Gln Leu His Asp
 165 170 175

Thr Phe Arg Phe Cys Leu Val Thr Asn Leu Thr Met Asp Ser Val Leu
 180 185 190

Val Thr Val Lys Ala Leu Phe Ser Ser Asn Leu Asp Pro Ser Leu Val
 195 200 205

Glu Gln Val Phe Leu Asp Lys Thr Leu Asn Ala Ser Phe His Trp Leu
 210 215 220

Gly Ser Thr Tyr Gln Leu Val Asp Ile His Val Thr Glu Met Glu Ser
 225 230 235 240
 Ser Val Tyr Gln Pro Thr Ser Ser Ser Ser Thr Gln His Phe Tyr Leu
 245 250 255
 Asn Phe Thr Ile Thr Asn Leu Pro Tyr Ser Gln Asp Lys Ala Gln Pro
 260 265 270
 Gly Thr Thr Asn Tyr Gln Arg Asn Lys Arg Asn Ile Glu Asp Ala Leu
 275 280 285
 Asn Gln Leu Phe Arg Asn Ser Ser Ile Lys Ser Tyr Phe Ser Asp Cys
 290 295 300
 Gln Val Ser Thr Phe Arg Ser Val Pro Asn Arg His His Thr Gly Val
 305 310 315 320
 Asp Ser Leu Cys Asn Phe Ser Pro Leu Ala Arg Arg Val Asp Arg Val
 325 330 335
 Ala Ile Tyr Glu Glu Phe Leu Arg Met Thr Arg Asn Gly Thr Gln Leu
 340 345 350
 Gln Asn Phe Thr Leu Asp Arg Ser Ser Val Leu Val Asp Gly Tyr Phe
 355 360 365
 Pro Asn Arg Asn Glu Pro Leu Thr Gly Asn Ser Asp Leu Pro Phe Trp
 370 375 380
 Ala Val Ile Leu Ile Gly Leu Ala Gly Leu Leu Gly Leu Ile Thr Cys
 385 390 395 400
 Leu Ile Cys Gly Val Leu Val Thr Thr Arg Arg Arg Lys Lys Glu Gly
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 Glu Tyr Asn Val Gln Gln Gln Cys Pro Gly Tyr Tyr Gln Ser His Leu
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 Asp Leu Glu Asp Leu Gln
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<210> 391
 <211> 2627
 <212> DNA
 <213> Homo sapiens

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 tagcatcatc attattcttg ctggagcaat tgcactcatc attggctttg gtatttcagg 180
 gagacactcc atcacagtca ctactgtcgc ctcagctggg aacattgggg aggatggaat 240
 cctgagctgc acttttgaac ctgacatcaa actttctgat atcgtgatac aatggctgaa 300
 ggaaggtgtt ttaggcttgg tccatgagtt caaagaaggc aaagatgagc tgctcggagca 360

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taaaatgcac gtggagacaa gtgcatcccc agatctcagg gacctcccc tgctgtcac 1260
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gctgtaatgt tgctctgagg aagcccctgg aaagtctatc ccaacatatc cacatcttat 1380
attccacaaa ttaagctgta gtatgtacct taagacgctg ctaattgact gccacttcgc 1440
aactcagggg cggctgcatt ttagtaatgg gtcaaagatg tcacttttta tgatgcttcc 1500
aaaggtgctt tggcttctct tcccaactga caaatgccaa agttgagaaa aatgatcata 1560
atcttagcat aaacagagca gtgcggcaga ccgattttat aaataaactg agcaccttct 1620
ttttaaacia acaaatgcgg gtttatttct cagatgatgt tcatccgtga atgggtccagg 1680
gaaggacctt tcaccttgac tatatggcat tatgtcatca caagctctga ggcttctctt 1740
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cagctggggg gatttcgccc cccatctccg ggggaatgtc tgaagacaat tttggttacc 1860
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tgctgctcaa cctcctacca tgtacaggac gtctcccat tacaactacc caatccgaag 1980
tgtcaactgt gtcaggacta agaaacctg gttttgagta gaaaagggcc tggaaagagg 2040
ggagccaaca aatctgtctg ctctctcaca ttagtcattg gcaaataagc attctgtctc 2100
tttggctgct gcctcagcac agagagccag aactctatcg ggcaccagga taacatctct 2160
cagtgaacag agttgacaag gcctatggga aatgcctgat gggattatct tcagcttgtt 2220
gagcttctaa gtttctttcc ctctattcta ccctgcaagc caagtctgtt aagagaaatg 2280
cctgagttct agctcaggtt ttcttactct gaatttagat ctccagacct ttcttgacca 2340
caattcaaat taaggcaaca aacatatacc ttccatgaag cacacacaga cttttgaaag 2400
caaggacaat gactgcttga attgagcct tgaggaatga agctttgaag gaaaagaata 2460
ctttgtttcc agcccccttc ccacactctt catgtgttaa cactgcctt cctggacctt 2520
ggagccacgg tgactgtatt acatgttgtt atagaaaact gattttagag ttctgatcgt 2580
tcaagagaat gattaaatat acatttctca caccaaaaaa aaaaaaa 2627

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<210> 392

<211> 310

<212> PRT

<213> Homo sapiens

<400> 392

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His Ala Ser Ala His Ala Ser Gly Arg Gln Arg Gln Leu His Ser Ala
          5                      10                      15

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Ser Thr Gln Ile Arg Trp Glu Pro Ser Pro Ala Met Ala Ser Leu Gly
          20                      25                      30

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Gln Ile Leu Phe Trp Ser Ile Ile Ser Ile Ile Ile Ile Leu Ala Gly
          35                      40                      45

```

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Ala Ile Ala Leu Ile Ile Gly Phe Gly Ile Ser Gly Arg His Ser Ile

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50 55 60
 Thr Val Thr Thr Val Ala Ser Ala Gly Asn Ile Gly Glu Asp Gly Ile
 65 70 75 80
 Leu Ser Cys Thr Phe Glu Pro Asp Ile Lys Leu Ser Asp Ile Val Ile
 85 90 95
 Gln Trp Leu Lys Glu Gly Val Leu Gly Leu Val His Glu Phe Lys Glu
 100 105 110
 Gly Lys Asp Glu Leu Ser Glu Gln Asp Glu Met Phe Arg Gly Arg Thr
 115 120 125
 Ala Val Phe Ala Asp Gln Val Ile Val Gly Asn Ala Ser Leu Arg Leu
 130 135 140
 Lys Asn Val Gln Leu Thr Asp Ala Gly Thr Tyr Lys Cys Tyr Ile Ile
 145 150 155 160
 Thr Ser Lys Gly Lys Gly Asn Ala Asn Leu Glu Tyr Lys Thr Gly Ala
 165 170 175
 Phe Ser Met Pro Glu Val Asn Val Asp Tyr Asn Ala Ser Ser Glu Thr
 180 185 190
 Leu Arg Cys Glu Ala Pro Arg Trp Phe Pro Gln Pro Thr Val Val Trp
 195 200 205
 Ala Ser Gln Val Asp Gln Gly Ala Asn Phe Ser Glu Val Ser Asn Thr
 210 215 220
 Ser Phe Glu Leu Asn Ser Glu Asn Val Thr Met Lys Val Val Ser Val
 225 230 235 240
 Leu Tyr Asn Val Thr Ile Asn Asn Thr Tyr Ser Cys Met Ile Glu Asn
 245 250 255
 Asp Ile Ala Lys Ala Thr Gly Asp Ile Lys Val Thr Glu Ser Glu Ile
 260 265 270
 Lys Arg Arg Ser His Leu Gln Leu Leu Asn Ser Lys Ala Ser Leu Cys
 275 280 285
 Val Ser Ser Phe Phe Ala Ile Ser Trp Ala Leu Leu Pro Leu Ser Pro
 290 295 300
 Tyr Leu Met Leu Lys
 305

<210> 393

<211> 283

<212> PRT

<213> Homo sapiens

<400> 393

Met Ala Ser Leu Gly Gln Ile Leu Phe Trp Ser Ile Ile Ser Ile Ile
5 10 15

Ile Ile Leu Ala Gly Ala Ile Ala Leu Ile Ile Gly Phe Gly Ile Ser
20 25 30

Gly Arg His Ser Ile Thr Val Thr Thr Val Ala Ser Ala Gly Asn Ile
35 40 45

Gly Glu Asp Gly Ile Leu Ser Cys Thr Phe Glu Pro Asp Ile Lys Leu
50 55 60

Ser Asp Ile Val Ile Gln Trp Leu Lys Glu Gly Val Leu Gly Leu Val
65 70 75 80

His Glu Phe Lys Glu Gly Lys Asp Glu Leu Ser Glu Gln Asp Glu Met
85 90 95

Phe Arg Gly Arg Thr Ala Val Phe Ala Asp Gln Val Ile Val Gly Asn
100 105 110

Ala Ser Leu Arg Leu Lys Asn Val Gln Leu Thr Asp Ala Gly Thr Tyr
115 120 125

Lys Cys Tyr Ile Ile Thr Ser Lys Gly Lys Gly Asn Ala Asn Leu Glu
130 135 140

Tyr Lys Thr Gly Ala Phe Ser Met Pro Glu Val Asn Val Asp Tyr Asn
145 150 155 160

Ala Ser Ser Glu Thr Leu Arg Cys Glu Ala Pro Arg Trp Phe Pro Gln
165 170 175

Pro Thr Val Val Trp Ala Ser Gln Val Asp Gln Gly Ala Asn Phe Ser
180 185 190

Glu Val Ser Asn Thr Ser Phe Glu Leu Asn Ser Glu Asn Val Thr Met
195 200 205

Lys Val Val Ser Val Leu Tyr Asn Val Thr Ile Asn Asn Thr Tyr Ser
210 215 220

Cys Met Ile Glu Asn Asp Ile Ala Lys Ala Thr Gly Asp Ile Lys Val
225 230 235 240

Thr Glu Ser Glu Ile Lys Arg Arg Ser His Leu Gln Leu Leu Asn Ser
245 250 255

Lys Ala Ser Leu Cys Val Ser Ser Phe Phe Ala Ile Ser Trp Ala Leu
260 265 270

Leu Pro Leu Ser Pro Tyr Leu Met Leu Lys
275 280

11729.1 contg

TTAGAGAGGCCACAGAAGGAAGAAGAGTTAAAAGCAGCAAAGCCGGGTTTTTTGTTTTGT
TTTTTTTTGTTTTGTTTTGAGATGGAGTCTCACTCTGTTGCCCAAGCTGGAGTACAACGGCA
TGATCTCAGCTCGCTGCAACCTCCGCTCCACGTTCAAGTGATTCTCCTGCCTCAGCCTCC
CAAGTAGCTGGGATTACAGGGCGCCGCCACCACGCTCAGCTAATTTTTTTGTATTTTAGT
AGAGACAGGGTTTCACCAGGTTGCCAGGCTGCTCTTGAACCTCCTGACCTCAGGTGATCCA
CCCGCTCGGCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACCACGCGCGCCCCCAA
AGCTGTTTCTTTTGTCTTTAGCGTAAAGCTCTCCTGCCATGCAGTATCTACATAACTGACGT
GACTGCCAGCAAGCTCAGTCACTCCGTGGTC

11729-45.21.21.cons1

TAGGATGTGTTGGACCCTCTGTGTCAAAAAAAACCTCACAAAGAAATCCCCTGCTCATTACA
GAAGAAGATGCATTTAAAAATATGGGTTATTTTCAACTTTTTATCTGAGGACAAGTATCCAT
TAATTATTGTGTCAGAAGAGATTGAATACCTGCTTAAGAAGCTTACAGAAGCTATGGGAG
GAGGTTGGCAGCAAGAACAATTTGAACATTATAAAATCAACTTTGATGACAGTAAAAATG
GCCTTTCTGCATGGGAACCTTATTGAGCTTATTGGAATGGACAGTTTAGCAAAGCCATGGA
CCGGCAGACTGTGTCTATGGCAATTAAATGAAGTCTTTAATGAACCTTATATTAGATGTGTTA
AAGCAGGGTTACATGATGAALAAAGGGCCACAGACGGAAAAACTGCACTGAAAGATGGTT
TGTAATAAAACCCAAACATAATTTCTTACTATGTGAGTGAGGATCTGAAGGATAAGAAAGG
AGACATTCTCTTGGATGAALAAATGCTGTCTAGAGTCTTGCCTGACAAAGATGGAAA

11729-45.21.21.cons2

TTAGAGAGGCCACAGAAGGAAGAAGAGTTAAAAGCAGCAAAGCCGGGTTTTTTGTTTTGT
TTTTTTTTGTTTTGTTTTGAGATGCAAGTCTCACTCTGTTGCCCAAGCTGGAGTACAACGGCA
TGATCTCAGCTCGCTGCAACCTCCGCTCCACGTTCAAGTGATTCTCCTGCCTCAGCCTCC
CAAGTAGCTGGGATTACAGGGCGCCGCCACCACGCTCAGCTAATTTTTTTGTATTTTAGT
AGAGACAGGGTTTCACCAGGTTGCCAGGCTGCTCTTGAACCTCCTGACCTCAGGTGATCCA
CCCGCTCGGCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACCACGCGCGCCCCCAA
AGCTGTTTCTTTTGTCTTTAGCGTAAAGCTCTCCTGCCATGCAGTATCTACATAACTGACGT
GACTGCCAGCAAGCTCAGTCACTCCGTGGTC

11731.1contig

TCTTTTTCTTTTGGATTTCTTCAATTTGTACAGTTTGATTTTATGAAGTTGTTCAAGGGCTAA
CTGCTGTGTAATTATAGCTTTCTCTGAGTTCTTCAAGCTGATTGTTAAATGAATCCATTTCTG
AGAGCTTAGATGCAAGTTTCTTTTCAAGAGCATCTAATTTGTTCTTTAAGTCTTTGGCATAAT
TCTTCTTTTCTGATGACTTTTATGAAGTAAACTGATCCCTGAATCAGGTGTGTTACTGAG
CTGCATGTTTAAATTTCTTTTCTTTTAAATAGCTGCTTCTCAGGGACCAGATAGATAAGCTTAT
TTTGATATTCTTAAAGCTCTTTTGAAGTTGTTTCAATTTCCATAATTTCCAGGTACACTGT
TTATCCAAAACCTTCTAGCTCAGTCTTTTGTGTTTCTGATTTGGACATCTTGTAGTCTG
CCTGAGATCTGCTGATGXTTCCAATCACTGCTTCCAAGTCCAGGTGGAGACTTTXCTTTCT
GGAGCTCAGCCTGACAATGCCCTTCTTGTCTCT

FIG. 1A

11731.2contig

AGCCAGATGGCTGAGAGCTGCAAGAAGAAGTCAGGATCATGATGGCTCAGTTTCCCACAG
CGATGAATGGAGGGCCAAATATGTGGGCTATTACATCTGAAGAACGTAAGCATGATA
AACAGTTTGATAACCTCAAACTTCAGGAGGTTACATAACAGGTGATCAAGCCCGTACTTT
TTTCCTACAGTCAGGTCTGCCGGCCCCGGTTTTAGCTGAAATATGGGCCTTATCAGATCTG
AACAAAGGATGGGAAGATGGACCAGCAAGAGTTCTCTATAGCTATGAAACTCATCAAGTTA
AAGTTGCAGGGCCAACAGCTGCCTGTAGTCTCCCTCCTATCATGAAACAACCCCTATGT
TCTCTCCACTAATCTCTGCTCGTTTTGGGAATGGGAAGCATGCCCAATCTGTCCATTTCATCAG
CCATTGCCCTCCAGTTGCACCTATAGCAACACCCCTTGTCTTCTGCTACTTCAGGGACCAGTAT
TCCTCCCCTAATGATGCCTGCTCCCCTAGTGCCTTCTGTAGTA

11734.1contig

AATAGATTTAATGCAGAGTGTCAACTTCAATTGATTGATAGTGGCTGCCTAGAGTGCTGTG
TTGAGTAGGTTTCTGAGGATGCACCCTGGCTTGAAGAGAAAGACTGGCAGGATTAACAAT
ATCTAAAATCTCACTTGTAGGAGAAACCACAGGCACCAGAGCTGCCACTGGTGCTGGCAC
CAGCTCCACCAAGGCCAGCGAAGAGCCCAATGTGAGAGTGGCGGTCAGGCTGGCACCAG
CACTGAAGCCACCACTGGTCTGCTGGCACTGGCACTGGCACTGTTATTGGTACTGGTACTGGC
ACCAGTGCTGGCACTGCCACTCTCTTGGGCTTTGGCTTTAGCTTCTGCTCCCGCCTGGATCC
GGGCTTTGGCCAGGGTCCGATATCAGCTTCGTCCAGTTGCAGGGCCCCGGCAGCAATTCTC
CGAGCCGAGCCCAATGCCCAATCGAGCTCTAATCTCGGCCCTAGCCTTGGCTTCAGCTGCA
GCCTCAGCTGCAGCCTTCAAAATCCGGTTCATCCCTCTCGGTAC

11734.2contig

GCCAAGAAAGCCCCGAAAGCTGAAGCATCTGGATGGGGAAGAGGATGGCAGCAGTGATCA
GAGTCAGGCTTCTGGAACACAGCTGSCCGAAGGGTCTCAAAAGGCCCTAATGGCCTCAAT
GGCCCCCAGGGCTTCAAGGGGTCCCATAGCCTTTGGGGCCCGCAGGGCATCAAGGACTCG
GTTGGCTGCTTGGGCCCGGAGAGCCTTCTCTCCCTCAGATCACCTAAAGCCCCGTAGGGCC
AAGCCTCGCCGTAGAGCTGCCAAGCTTCACTCAATCCCAAGAGCCTGAAGCACCCACCT
CGGGATGTGCCCTTTTCCAAGGGAGCGCAAAATGAATTTGGTGAAGTACCTTTTGGCTAAAG
ACCAGACGAAGATTCCCATCAAGCCTTGGACATGCTGAAGGACATCAATCAAGAATACA
CTGATGTGTACCCCGAAATCAATTGAACBAGCAGGCTATTCTTGGAGAAGGTATTTGGGAT
TCAATTGAAGGAAATTCATAAGCAATGACCAGTTGTACATTCTTCTCAGC

11736.1contig

GAGGTCTCACTATGTTGCCACGCTGTTCTGAACCTCCTGGGATCAAGCAATCCACCCATG
TTGGTCTCCAAAAGTGCTGGGATCATAGGCGTGAGCCACCTCACCCAGCCACCAATTTTCA
ATCAGGAAGACTTTTCTTCTTCAAGAAAGTGAAGCGTTTCCAGAGTATAGCTACACTATT
GCTTGCCTCAGGCTCACTACAAATTCCTTCTTCTTAAAGGTTAGGATCGGTAAAGAAATTAG
ATTTTCTGAATGCCAAAATTAATGTGAAGTAACTTTAGGTAATACATAATTCATAAA
ATAATTATTCACATAATTCCTGATTAATACAGAAATAATGTATGAAATGCTTTGAGTTTCT
TGGAGTAAACTCCATTACTCATCCCAAGAAACCATATTATAAGTATCACTGATAATAAGAA
CAACAGGACCTTGTATATAATTCCTGATAAGAGAAATAGTCTCTGGGTGTTTCTTCTTAAT
TGATAAAATTAATTTGTCATCTTTAGCTCAGAAATCACAATA

FIG. 1B

11736.2contig

AAGCGGAAATGAGAAAGGAGGGAAAATCATGTGGTATTGAGCGGAAAACCTGCTGGATGA
CAGGGCTCAGTCCTGTTGGAGAACTCTGGGTGGTGGCTGTAGAACAGGGCCACTCACAGTG
GGGTGCACAGACCAGCACGGCTCTGTGACCTGTTTGTACAGGTCCATGATGAGGTAAAC
AATACACTGAGTATAAGGGTTGGTTAGAACTCTTACAGCAATTTGACAAAGTAATCTTC
TGTGCAGTGAATCTAAGAAAAAATGGGGCTGTATTTGTATGTTCTTTTTTTCATTTTCAT
GTTCTGAGTTACCTATTTTTATTGCATTTTACAAAAGCATCCTTCCATGAAGGACCGGAAGT
TAAAAACAAAGCAGGTCTTTATCACAGCACTGTCTAGAACACAGTTCAGAGTTATCCAC
CCAAGGAGCCAGGGAGCTGGGCTAACCAGAAATTTTGCTTTTGGTTAATCATCAGGTA
CTTGAGTTGGAATTGTTTTAATCCCATCATTACCAGGCTGGAXGTG

11739-1&2

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GAGACATTCAAGCAAAGGTTGGACAACTACTTTCCAGAACAGAAAGGAAACTCATGCAT
CAGAAAAGGTGACTAATAAAGGTACCAGAAATATGGCTGCACAAATACCAGAACTCTGA
TCAGATAAAACAGTTTAAGGAATTTCTGGGGACCTACAATAAATTTACAGAGACCTGCTTT
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TGAGGACTCATCTGATAGAAATCCCTGAAAGCAGTAGCCACCATGTTCAACCATCTGTGAT
GACTGTTTGGCAAATGGAAACCGCTGGAGAAACAATAATTGCTATTTACCAGGAATAATCA
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TTCAGCAGCTTGGTCACTTGATTAGAAAAATAACCAATTGTTTCTTCAATTGTGACTGTTA
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TAAAAATAAATCGA

11740.1.contig

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GGCATAAGATATATCCACTTTTGATAATAAATTTGTGAAGCATATCTTCGACAAATTTGTG
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AACGAACAAGTGTGATGTCTAAATCTAGCCTCTGAAATAAACCTTGAACATCTCCTACAA
GGCACCCTGATTTTTGTAATTTCAACCTGAAGAAATGTGATGACTTTTGTGGACATGAAAA
TCAGATGAGAAAACCTGTGGTCTTTCCAAAGCCTGAACCTCCCTGAA.AACCTTTGCA

FIG. 1C

11766.1.contig

CTGGGATCAITTTCTCTTGATGTCATAAAAAGACTCTTCTTCTCTCTTCATCCTCTTCTTCAT
CCTCTTCTGTACAGTGCTGCCGGGTACAAACGGCTATCTTTGTCTTTATCCTGAGATGAAGAT
GATGCTTCTGTTTCTCCTACCATAACTGAAGAAATTCGCTGGAAGTCGTTTACTGGCTGT
TTCTCTGACTTACCTTCTTTGTCAAACCTGAGTCTTTTACCTCATGCCCCCTCAGCTTCCAC
AGCATCTTCACTGGAATGTTTATTTTCAAAGGGCTCACTGAGGAACTTCTGATTACAGAG
GTCGAAGAGTCACTGTGATTTTCTCCTCAATTTGCTGCAAATTTGCCTCTTTGCTGTCTGT
GCTCTCAGGCAACCCATTTGTTGTCATGGGGGCTGACAAAGAAACCTTTGGTCGATTAAAGT
GGCCTGGGTGTCCCAGGCCCAATTTATATTAGACCTCTCAGTATAGCTTGGTGAATTTCCAG
GAAACATAACACCAATTCATTCGATTTAAACTATTGGAATTGGTTTT

11766.2.contig

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AGGGGGAGGGCGTCGGGGGGGTGGGGGGAGGGCTTCCGGTCCCCAAGAGACCCGCGGAG
GGAGGCGGAGGCTGTGAGGGAATCGGGGAAGCCATGGACGTGAGAGGCTCCAGGAGGC
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TTGTATGTAGCCAAGACTGGAAGAAACAATGATTACAGTGGTCCCAATTTAAAGGCTATTTT
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CTCCCAACCCCTAATGTGCA

11766.3.contig

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CGCCCGCGCGCGCGCGCTCGCGACCGCCAGCATGCTGCCGAGAGTGGGCTGCCCGCGCT
GCCGXTGCCG

11766.1&2

ATCTCTTGATGCCAAATAATTAATAAAAATCTTTGAAACAAGTTCAGATGAAATAAAAAAT
CAAAGTTTGCAAAAACGTGAAGATTAACCTAAATGTCAAAATATTCCTCATTTGCCCCAAATC
AGTATTTTATTTTCTATGCCAAAGTATGCTTCAAACTGCTTAAATGATATATGATATG
ATACACAAACCAGTTTCAAAATAGTAAAGCCAGTCACTTTGCAATTGTAAGAAATAGGTA
AAAGATATAACACACCTTACACACACACACACACACACACAGTGTGCACGCCAATGAC
AAAAAACAATTTGGCCTCTCCTAAAAATAAGAACATGAAGACCCTTAATTGCTGCCAGGAG
GGAACACTGTGTACCCCTCCTACAAATCCAGGTAGTTTCTTTAATCCAATAGCAAATCT
GGCATAATTTGAGAGGAGTGAATCTGACAGCCACGTGAAATCCTGTGGGGAACCAATTCAT
GTCCACCCACTGGTGGCCTGAAAAATGCCAATAATTTTCCGCTCCCACTTCTGCTGTGCTG
TCTTCCACATCCTCACATAGACCCGAGACCCGCTGGCCCTGGCTGGGCAATCGCATTTGCTG
GTAGAGCAAGTCAATAGGTCTCGTCTTTGACCTCACAGAAAGCGATACACCAAATTCCTGCT
CGGTCAATGTACATAACCAGAGA

FIG. 1D

11777.1&2.cons

CAGACGGGGTTCCTACTATGTTGGCTAGGCTGGTCTTGAACCTCCTGACTTCAGGTGATCTGC
CTGCCCTGGCCTCCCAAAGTGCTGGGATTACAGGCATAAGCCACTGCGCCGGCTGATCTG
ATGGTTTCATAAAGGCTTTTCCCCCTTTTGGCTCAGCACTTCTCCTTCTGCGCCCATGTGAAG
AAGGACATGTTTGGCTTCCCCCTTCCACCACGATTGTAAGTTGTTTCTGAGGCCTCCCCGGCC
ATGCTGAACCTGTGAGTCAATTAAACCTCTTTCTTTATAAAATTATCCAGTTTGGGTATGTC
TTTATTAGTAGAATGAGAACAGACTAATACAACCTTAAAGGAGACTGACGGAGAGGATT
CTTCTGGATCCCAGCACTTCTCTGAATGCTACTGACATTCTTCTTGAGGACTTTAAACTG
GGAGATAGAAAACAGATTCCATGGCTCAGCAGCCTGAGAGCAGGGAGGGAGCCAAGCTA
TAGATGACATGGGCAGCCTCCCCCTGAGGCCAGGTGTGGCCGAACCTGGGCAGTGCTGCGAC
CCACCCACCAGGGCCAAGTCCTGTCTTGGAGAGCCAAGCCTCAATCACTGCTAGCCTCA
AGTGTCCCCAAGCCACAGTGGCTAGGGGGACTCAGGGAACAGTTCCAGTCTGCCCTACTT
CTCTTACCTTTACCCCTCATACCTCCAAAGTAGACCATGTTTATGAGGTCCAAAGG

11779.2.contig

AAGCGAGGAAGCCACTGCGGCTCCTGGCTGAAAAGCGGGCCAGGCTCGGGAACAGAGG
GAACGCGAAGAACAGGAGCGGAAGCTGCAGGCTGAAAAGGACAAAGCGAATCCGAGAGG
AGCAGCTGGCCCGGGAGGCTGAAGCCCGGGCTGAACGTGAGGCCGAGGCCCGGAGACGG
GAGGAGCAGGAGGCTCGAGAGCAAGGCCAGGCTGAGCAGGAGGAGCAGGAGCGACTGCA
GAAGCAGAAAGAGGAAGCCGAAGCCCGGTCCTCGGGAAGAAGCTGAGCGCCAGCGCCAGG
AGCGGGAAAAGCACTTTTCAAGGAGGAACAGGAGAGACAAGAGCGAAGAAAAGCGGCTG
GAGGAGATAATGAAGAGGACTCGGAAATCAGAAGCCGCGCAACCAAGAAGCAGGATGC
AAAGGAGACCGCAGCTAACAAATCCCGCCAGACCTTGTGAAAGCTGTAGAGACTCGGC
CCTCTGGGCTTCCAGAAAGGATTCTATTCAGAAAGGAAGGAGCTKGGCCCCCAKGGGA

11781 & 37.cons

CTCTGTGGAAAACCTGATGAGGAATGAAATTTACCATACCCATGTTCTCATCCCCAAGCAAA
GTGCTGGGTCTGATTACTGCAACACAGAGAACGAAGAAGAATTTTCTCATACAGGATC
AGCAGGGCCTCATCACACTGGGCTCGATTTCATACTACCCACACAGAGCCGGCTTTCTCTC
CAGTGTGACCTACACACTCACTCCTCTTACCAGATGATGTTGCCAGAGTCAGTAGCCATT
GTTTGCTCCCCCAAGTTCCAGGAAGCTGGATTCTTTAAACTAACTGACCATGGACTAGAGG
AGATTTCTTCTGTGCGCCAGAAAGCAATTTTCATCCACACACCAAGGATCCACCTCTGTTCTG
TAGCTCCAGCCACCTGACTGTTGTGGACAGAGCAGTGACCATCACAGACCTTCGATGAGC
GTTTGAGTCCAACACCTTCCAAGAACAAACAAACCATATCACTGTACTGTAGCCCCCTTAAT
TTAAGCTTTCTAGAAAGCTTTGGAACTTTTGTAGATAGTAGAAAGGGGGGCATCACXTGA
GAAAGAGCTGATTTTGTATTTTCACTTTGAAAAGAAATAACTGAACATATTTTITAGGCAA
GTCAGAAAGAGAACATGCTCACCCAAAAGCAACTGTAACTCAGAAATTAAGTTACTCAGA
AATTAAGTAGCTCAGAAAATTAAGAAAGAAATGGTATAATGAACCCCATATACCTTCTCTC
TGGATTACCAATTTGTTAACAATTTTCTCTCAGCTATCCTTCTAAATTTCTCTCTAAATTC
AAATTTGTTTATATTTACCTCTGGGCTCAATAAGGGCATCTGTCCAGAAATTTGGAAGCCAT
TTAGAAAATCTTTTGGATTTTCTGTGGTTTATGGCAATATGAATGGAGCTTATTACTGGG
GTGAGGGACAGCTTACTCCAATTTGACCAGATTGTTTGGCTAACACATCCCCAAGAATGATT
TTCTCAGGAATTAATGTTAATTAATAAATAATTCAGGATATTTTCTCTACAATAAAGTAA
CAAT

FIG. 1E

11781-76-87-37

CTCTGTGGAAAAGTGTGAGGAATGAATTTACCATACCCATGTTCTCATCCCCAAGCAAA
GTGCTGGGTCTGATTACTGCAACACAGAGAACGAAGAAGAACTTTTCCTCATACAGGATC
AGCAGGGCCTCATCACTGGGCTGGATTTCATCTACCCACACAGACCGGTTTCTCTC
CAGTGTGCGACCTACACACTCACTGCTCTTACCAGATGATGTTGCCAGAGTCAGTAGCCATT
GTTTGTCTCCCCAAGTTCCAGGAACTGGATTCTTTAACTAACTGACCATGGACTAGAGG
AGATTTCTTCTGTGCGCCAGAAAGGATTTTCATCCACACAGCAAGGATCCACCTCTGTTCTG
TAGCTGCAGCCACGTGACTGTTGTGGACAGAGCAGTGACCATCACAGACCTTCGATGAGC
GTTTGAGTCCAACACCTTCCAAGAACAACAAAACCATATCAGTGTACTGTAGCCCTTAAT
TTAAGCTTTCTAGAAAAGCTTTGGAAGTTTTGTAGATAGTAGAAAGGGGGGCATCACCTGA
GAAAGAGCTGATTTTGTATTTTCAGGTTTGAAGAAATAACTGAACATATTTTTAGGCAA
GTCAGAAAGAGAACATGGTCACCCAAAAGCAACTGTAACCTCAGAAATTAAGTTACTCAGA
AATTAAGTAGCTCAGAAATTAAGAAAGAAATGGTATAATGAACCCCATATACCTTCTCTC
TGGATTACCAATTTGTTAACATTTTTTCTCTCAGCTATCCTTCTAATTTCTCTAATTTT
AATTTGTTTATATTTACCTCTGGGCTCAATAAGGGCATCTGTGCAGAAATTTGGAAGCCAT
TTAGAAAATCTTTTGGATTTTCTGTGGTTTATGGCAATATGAATGGAGCTTATTACTGGG
GTGAGGGACAGCTTACTCCATTTGACCAGATTGTTTGGCTAACACATCCCGAAGAATGATT
TTGTCAGGAATTAATTGTTATTTAATAAATATTTTACGGATATTTTTCTCTACAATAAAGTAA
CAATTA

11784-1 & 2

GGACGACAAGGCCATGCGGATATCGGATCGGAATTCAGCCCTTTGGAATTAATAAACCT
GGAACAGGGAAGGTGAAAGTTGCACTGAGATGTCTTCCATATCTATACCTTTGTGCACAGT
TGAATGGGAAGCTGTTTGGGTTTAGGGCATCTTAGAGTTGATTGATGGAATAAGCAGACAG
GAAGTGGTGGGAGGTCAAGTGGGGAAGTTGGTGAATGTGGAATAACTTACCTTTGTGCTC
CACTTAAACCAGATGTGTTCCAGCTTTCTGACATGCAAGGATCTACTTTAATTCACACT
CTCATTAATAAATTGAATAAAAGGCAATGTTTGGCACCTGATATAATCTGCCAGGCTATG
TGACAGTAGGAAGGAATGGTTTCCCTAACAAAGCCCAATGCACTGGTCTGACTTTATAAAT
TATTAATAAATAAGCACTATTAATC

11785.2.contig

GCCAGTGACATTCACCATCATGCGAAGCACTTCCCTTTTCTTCAGGATTCTCTGTAGTGG
AAGAGAGCACCCAGTGTTCGGCTGAAACATCTGAAAGTAGGGAGAAGAACCTAAAATA
ATCAGTATCTCAGAGGGCTCTAAGGTGCCAAGAAGTCTCACTGGACATTTAAGTGCCAAC
AAAGGCATACTTTCCGAATCCCAAGTCAAAACTTTCTAACTTCTGTCTCTCAGAGACA
AGTGAGACTCAAGAGTCTACTGCTTAGTGGCAACTACAGAAAAGTGGTGTACCCAGAA
AAACAGGAGCAATTAGAAATGGTTCCAATTTCAAAGCTCCGCAACAGGATGTGCTTT
CCTTGGCCCAATTAGGCTTTCTCTCTTCCCTTCTCTTTAATAACCACT

FIG. 1F

11718-1&2 cons

TGCGCTGAAAAA⁵AACGGCCTCCTTTACTGTTAA¹⁰AATGCAGCCACAGGTGCTTAGCCGTGGG
CATCTCAACCACCAGCCTCTGTGGGGGGCAGGTGGGGCGTCCCTGTGGGCCTCTGGGCCCAC
GTCCAGCCTCTGTCTCTGCTTCCGTTCTTCGACAGTGTTC¹⁵CGGCATCCCTGGTCACTTG
GTACTTGGCGTGGGCCTCCTGTGCTGCTCCAGCAGCTCCTCCAGGXGGTGGGCCCCGCTTCA
CCGAGCCTCATGTTGTGTCCGGAGGCTGCTCACGGCCTCCTCCTTCCTCGCGAGGGCTGT
CTTCACCCCTCCGGXGCACCTCCTCCAGCTCCAGCTGCTGGCGGGCCTGCAGCGTGGCCAGC
TCGGCCTTGGCCTGCCGCGTCTCCTCCTC²⁰ARAGGCTGCCAGCCGGTCTCGAACTCCTGGC
GGATCACCTGGGCCAGGTTGCTGCGCTCGCTAGAAAGCTGCTCGTTACCGCCTGEGCATC
CTCCAGCGCCCCGCTCCTTCTGCCGCACAAGGCCCTGCAGACGCAGATTCTCGCCCTCGGCCT
CCCCAAGCTGGCCCTTCAGCTCCGAGCACCGCTCCTGAAGCTTCGGCTCCGACTGCTCCAG
CTCGGAGAGCTCGGCCTCGTACTTGTCCCGTAAGCGCTTGATGCGGCTCTCGGCAGCCTTC
TCACTCTCCTCCTTGGCCAGCGCCATGTGGGCTCCAGCCGGTGAATGACCAGCTCAATCT
CCTTGTC²⁵CGGCTTTCCGGA³⁰TTTCTTCCCTCAGCTCCTGTTCCCGGTTACAGCAGCCACGCC
TCCTCCTTCTGGTGGCGCGGCTCCACGCCTGCCTCTCCAGCTCCAGCTGCTGCTTCAG
GGTATTCAGCTCCATCTGGCGGGCCTGCAGCGTGGCCA

13690.4

CAACTTATTACTTGAAA⁵TTATAATATAGCCTGTCCGTTT¹⁰GCTGTTTCCAGGCTGTGATATAT
TTTCCTAGTGGTTTGACTTTAAAAATAAATAAGGTTTAA¹⁵TTTTCTCCCC

13693.1

TGCAAGTCACGGGAGTTTATTTA⁵TTTAA¹⁰TTTTTTTCCCCAGATGGAGACTCTGTGCGCCACGG
CTGGAGTGCAATCGTGTGATCTTGGCTCACTGCAACCTCCACCTCCTGGGTTCAAGCGATT
CTCCTGCCACAGCCTCCCGAGTAGCTGGGATTACAGGTGCCCGCCACCACACCCAGCTAAT
TTTTATATTTTAGTAAAGACAGGGTTT¹⁵CCCCATGTTGGCCAGGCTGGTCTTGAAC²⁰TTCTGA
CCTCAGGTGATGCAACCTGGCTCGCCCTCCCAAGTGTGGGATTACAGCGCTGACCTACCC
GTGCCTGCCCAGCCACTGGAGTTTAAAGGACAGTCATGTTGGCTCCAGCCTAAGCGGGCA
TTTTCCCCCATCAGAAAGCCCGCGGCTCCTGTACCTCA²⁵AAAA³⁰TAGGGCACCTGTAAAGTCAG
TCAGTGAAGTCTCTCCTCTAACTGCCACCCGGGGCCATTGGCNTCTGACACAGCCTTGCC
AGGANCCCTGCATCTGCAAAAGAA³⁵AACTTCACTTCCTTTCCG

13694.1

CAGAGAATCTKAGAAAGATGTCGGCTTTTCTTTAATGAATGAGAGAAGCCCA⁵TTTGTATC
CCTGAATCAATTGAGAAAAGCGCGCGGTGGCGACAGCGCGACCTAGCGATCGATCTGGAG
GGACTTGGGGAGCGTGCAAGACCTCTAGCTCGAGCGCGAGGACCTCCCGCGGGATGC
CTGGCGAGCAGATGGACCTACTGGAAGTCAGTTGGATTCA¹⁰GATTTCTCTCAGCAAGATAC
TCCTTGCTGATAATTGAAGATTCTCAGCCTGAAGGCCAGGTTCTAGAGGATGATTCTGGT
TCTCACTTCAGTATGCTATCTCGACACCTTCCTAATCTCCAGACGCACA¹⁵AAAGAAAATCCTG
TGTTGGATGTTGNGTCCAATCCTTGAACAAACAGCTGGAGAAGAACGAGGAGACCGGTAA
TAGTGGCTTCAATGAACA²⁰TTTGAAGAAAACCAGGTTGCAGACCCTG

FIG. 1G

13694.2

GACTGTCCTGAACAAGGGACCTCTGACCAGAGAGCTGCAGGAGATGCAGAGTGGTGGCAG
GAGTGGAAAGCCAAAGAACACCCACCTTCTCCCTTGAAGGAGTAGAGCAACCATCAGAAG
ATACTGTTTTATTGCTCTGGTCAAACAAGTCTTCTGAGTTGACAAAACCTCAGGCTCTGGT
GACTTCTGAATCTGCAGTCCACTTTCCATAAAGTCTTGTGCAGACAACTGTTCTTTGCTTC
CATAGCAGCAACAGATGCTTTGGGGCTAAAAGGCATGTCTCTGACCTTGCAGGTGGTGG
ATTTTGCTCTTTTACAACATGTACATCCTTACTGGGCTGTGCTGTACAGGGATGTCTTGC
TGGACTGTTCTGCTATGGGGAATCTTCTGTTGGACTGTTCTTTCATGCTTAATTGCAGTATTA
GCATCCACATCAGACAGCCTGGTATAACCAGAGTTGGTGGTTACTGATTGTAGCTGCTCTT
TGTCCACTTCATATGGCACAAAGTATTTTCTCAACATCCTGGCTCTGGGAAG

13695.1

GAAATGTATATTTAATCATTCTCTTGAACGAATCAGAACTCTRAAATCAGTTTTCTATAACAR
CATGTAATACAGTCACCGTGGCTCCAAGGTCCAGGAAGGCAGTGGTTAACACATGAAGAG
TGTGGGAAGGGGGCTGGAAACAAGTAATCTTTTCTTCAAAGCTTCATTCTCAAGGCCT
CAATTCAGCAGTCAATGTCTTCTCTTCAAAGTCTGTGTGTGCTTCATGGAAGGTATAT
GTTTGTTCCTTAAATTTGAATTTGTGGCCAGGAAGGGTCTGGAGATCTAAATTCAGAGTAAG
AAAACCTGAGCTAGAACTCAGGCAATTTCTTTACAGAACTTGGCTTGCAGGGTAGAATGA
ANGGAAAGAACTTAGAAGCTCAACAAGCTGAAGATAATCCCATCAGGCATTTCCCATAG
GCCTTGCAACTCTGTTCACTGAGAGATGTAATCCTG

13695.2

AGTCTGGAGTCAGCAAAACAAGACCAACAACAARRAGAAGCCAAAGCAGAAGGCTCCA
ATATGAACAAGATAAAATCTATCTTCAAAGACATAATTAGAAGTTGGGAAAATAATTCTATGT
GAACCTAGACAAGTGTGTTAAGAGTGAATAAGTAAAAATCCAGCTGGAGACAAGTGCAATCCCC
AGATCTCAGGGACCTCCCCCTGCTCTCACTTGGGGACTGAGAGGACAGGATAGTGCAATG
TTCTTTGTCTCTGAATTTTAACTTATAATCTCTGTAAATGTTGCTCTGACGAAGCCCCCTGGAA
AGTCTATCCCAACATAATCCACATCTTATAATCCACAAATTAAGCTGTAGTATGTACCCCTAA
GACGCTGCTAATTCAGTCCCACTTCCCAACTCAGGGGGGGCTGCAATTTAGTAATGGGTCA
AATGATTCACTTTTATGATGCTTCCCAAGGTGCTTGGCTTCTCTTCCCAACTGACAAATG
CCCAAGTTGAGAAAATGATCATAATTTTAGCATAAACCGAGCAATCGGGCAGCCCC

13697.1

TAGCTGTCTTCTCACTCTTATGGCAATGACCCCATATCTTAATGGATTAAGATAATGAAA
GTGATATTTCTTACACTCTGTATGTAATACCAGAAGCTGAGGTGATACCCCGCTTGTCAATTGT
CATCCATATTTCTGGCACTCAGGGGGCAACTTTCTGGAATATTGCCAGGGAACCATGGCAGA
GGGGCACAGTGCAATTTCTGGGGAAATGCACATTTGGCTCAGCCTGGGTAAATGAGTGATATAC
ATTACCTCTGTTTACAACTCAATGGCCAGCAGCTCACAAGGCCCCACCAAAATACCAGAG
CCCAAGAAATGTAGTCTGTGATATGCTTTGCTGTGTCCCAACCCAAATCTCATCTTGA
ATTGTAAGCTCCCATAAATCCCATGTGTTGTGGCAGGGACCTGGTG

FIG. 1H

13697.2

ATCATGAGGATGTTACCAAAGGGATGGTACTAAACCATTTGTATTTCGTCTGTTTTCACT
GCTTTGAAGATACTACCTGAGACTGGGTAAATTTATAAACAAAAGAGATTTAATTGACTCAC
AGTTCTGCAATGGCTGAAGAGGGCTCAGGAACTTACAGTCATGGTGGAAGGCAAAGGAGG
AGCAAGGCATGTCTTACATGTCAGTAGGAGAGAGCGAGAGCAGGAGAACCTGCCACTT
ATAAACCATTCAGATCTCATAACTCCCTATCATGAGAAAAACATGGAGGAAACCACCCTC
ATGATCCAATCACCTCCCGCCAGGTCCCTCCCTCCGACACGTGGGGATTATAATTCAGGATT
AGAGGGACACAGAGACAAACCATATCATCATTCATGAGAAATCCACCCTCATAGTCCAAT
CAGCTCCTACCAGGCCCCACCTCCAACACTGGGGATTGCAATTCAACATGAGATTTGGATG
GGGACACAGATTCAAACCATATCATAC

13699.1&2

CATGGCCTTTCTCCTTAGAGGCCAGAGGTGCTGCCCTGGCTGGGAGTGAAGCTCCAGGCAC
TACCAGCTTTCTGATTTTCCCGTTTGGTCCATGTGAAGAGCTACCACGAGCCCCAGCCTCA
CAGTGTCCTCAAGGGCAGCTTGGTCTCTTGTCTGAGAGGCAGGCTGGTGTGACCCT
GGGAACCTTGACCCGGGAACAACAGGTGGCCAGAGTGAGTGTGGCCTGGCCCTCAACCT
AGTGTCCTCTCTCTCTCTCTGGAGCCAGTCTTGAGTTAAAGGCATTAAAGTGTAGATA
CAAGCTCCTTGTGGCTGGAAAAACACCCCTCTGCTGATAAAGCTCAGGGGGCCTGAGGA
AGCAGAGGGCCCTTGGGGGTGCCCTCCTGAAGAGAGCGTCAGGCCATCAGCTCTGTCCCTC
TGGTCTCTCCACGTCTGTCTCTCACCTCCATCTCTGGGAGCAGCTGCACCTGACTGGCCAC
GCGGGGGCAGTGGAGGCCACAGGCTCAGGCTGGCCGGGCTACCTGCCACCCTATGGCTTAC
AAAGTAGAGTTGGCCAGTTCTCTCCAGCTGAGGGGAGCCTCTGACTCCTAACAGTCTT
CCTTGGCCCTGCCATCATCTGGGGTGGCTGGCTGTCAAGAAAGGCCGGGCATGCTTTCTAAA
CACAGCCACAGGAGGCTTGTAGGGCATCTTCCAGGTGGGAACAGTCTTAGATAAGTAA
GGTGACTTGCCTAAGCCCTCCAGCACCTTGTATCTTGGAGTCTCACAGCAGACTGCATGT
SAACAACCTGGAACCGAAAAACATCCCTCAGTATAAAA

13703.3

CCAGAACCTCCTTCTCTTTGGAGAAATCCGGAGCCCTCTTGGAGACACAGAGGGTTTACCT
TGGATGACCTCTAGAGAAAATGCCCAAGAAAGCCACCTTCTGGTCCCAACCTGCAGACCC
ACAGCAGTCAGTTGCTCAGCCCTCTGCTAGAAAGGTCACTTGGCTCCATTGCCCTGCTTCCA
ACCAATGGGCAGGAGAGAAAGCCCTTTATTTCTCCCCACCCATTCTCCTGTACCAGCACCT
CCGTTTTAGTCAGYGTGTCCACCAACCGTACCCTTACACAGTCA

13705.1

TGCATGTAGTTTTATTTATGTGTTTTGCTGGAAAAACCAAGTGTCCCAGCAGCATGACTGA
ACATCACTCACTTCCCTACTTGATCTACAAGGCCAACGCCGAGAGCCAGACCAGGATTC
CAAACACACTGCACGAGAAATTTGTGGATCCGCTGTCAGGTAAGTGTCCGTCCTGACCCA
RACGCTGTTACGTGGCACAATGACTGTACAGTGCCACGTAACAGCACTGTACTTTCTCCCA
TGAACAGTTACCTGCCATGTATCTACATGATTCAGAAATTTGAACAGTTAATTCTGACA
CTTGAATAATCCCATCAAAAAACCGTAAAAATCACTTTGATGTTTGTAAACGACAACATAGCAT
CACTTTACGACAGAAATCATCTGAAAAACAGAAACAGCAATACATACATCTTAAAAAATG
CTGGGGTGGGCCAGGCCACAGCTTCAAGCCTGTAAATCCCAAGCACTTTGGGAGGCTTAAGCG
GGTG

FIG. 11

13709.2

TATGAAGAAAGGAAAAGAAGATAAATTTGTGAAAGAAATGGGTCCAGTTACTAGTCTTTGA
AAAGGGTCAGTCTGTAGCTCTTCTTAATGAGAAATAGGCAGCTTTCAGTTGCTCAGGGTCAG
ATTTCTTAGTGGTGTATCTAATCACAGGAAACATCTGTGGTTCCTCCAGTCTCTTTCTGG
GGGACTTGGGCCCCACTTCTCAATTTCAATTAATTAGAGGAAATAGAACTCAAAGTACAATTT
ACTGTTGTTTAAACAATGCCACAAAGACATGGTTGGGAGCTATTTCTTGATTTGTGTAAAT
GCTGTTTTTGTGTGCTCATAATGGTTCCAAAAATGGGTGCTGGCCAAAGAGAGATACTGT
TACAGAAGCCAGCAAGAAGACCTCTGTTCAATTCACACCCCCGGGGATATCAGGAATTGAC
TCCAGTGTGTGCAAATCCAGTTTGGCCTATCTTCT

13712.1&2

TGAGGGACTGATTGGTTTGCTCTCTGCTATTCAATTCCCCAAGCCCCACTTGTTCTGTCAGCG
TCCTCCTTCTCATTCCTTTAGTTGTACCCTCTCTTTTCATCTGAGACCTTTCCTTCTTGATGT
CGCCTTTTCTTCTTCTTGTCTTTTTCTGATGTTCTGCTCAGCATGTTCTGGGTGCTTCTCATCT
GCATCATTCCTTTCAGATGCTGTAGCTTCTTCTCCTCTTTCTGCCTCCTTTTCTTTTTCTTTT
TTTTGGGGGGGCTTGTCTCTGACTGCAGTTGAGGGGGCCCCAGGGTCTGGCCTTTGAGACG
AGCCAGGAAGGCCTGCTCCTGGGCCCTCTAGGCGAGCAAGCCTTGGCCTTCAATTGTGATCCCA
AGACGGGCAGCCTTGTGTGCTGTTCCGCCCTCACAGGCTTGGAGCAGCATCTCATCAGTCA
GAATCTTTGGGGACTTGGACCCCTGCTTGTGCTCATCACTGCAGCTCTCCAAGTCTTTGTTT
GGCTTCTCTCCACCTGAAGTCAATGTAGCCATCTTCACAACTTCTGATACAGCAAGTTGG
GCTTGGGATGATTATAACGGGTGGTCTCTCTAGAAAGGCTCCTTATCTGTACTCCATCCTG
CCCAGTTTCCACTACCAAGTTGGCCCGAGTCTTGTGAAAGAGCTCATCCACCAGTGGTTT
GTGA.ACTCCTTGGCAGGCTCATGCTCTACCCCATGAGTGTCTTGTTCAGYGTCAACCTGA
GAGCCTGAGTGATACCAATCTCCTTCCG

13714.1&2

GACAACATGAAATAAATCCTAGAGGACAAAATTA.AACTCAATAGAGTGTAGTCTAGTTAA
AAACTCGAAAAATGAGCAAGTCTGGTGGCAGTGGAGGAAGGGCTATACTATAAATCCAAG
TGGGCCCTCCTGATCTTAACAAGCCATGCTCATTATACACATCTCTGAACTGGACATACCAC
CTTACGCAGGAAACAGGGCTTGGAACTTCTAAGGGAAATTAACATGCCACCACCCACATC
TAACCTACCTGCCGGGTAGGTACCAATCCCTGCTTGGCTGAAATCAGTGCTC

13716.1&2

TTGGAATTAAATAAACCTGGAAACAGGGAAGGTGAAAGTTGGAGTGAGATGTCTTCCATAT
CTATACCTTTGTGCACACTTGAATGGGAAGTCTTTGGGTTTACGGCATCTTAGAGTTGATT
GATCGAAAAACCAGACAGGAAGTGGTGGGAGGTCAAGTGGGGAAGTTGGTGAATGTGGA
ATAACTTACCTTTGTGCTCCACTTAAACCAGATGTGTTGCAGCTTTCCTGACATGCAAGGA
TCTACTTTAATTCCACACTCTCATTAAATAAATTGAATAAAAGGGAATGTTTTGGCACCTGA
TATAATCTGCCAGGCTATGTGACAGTAGCAAGGAATGGTTTCCCCTAACAAAGCCCAATGC
ACTGGTCTGACTTTATAAAATTAATTAATAAATGAACATAATATC

FIG. 1K

13718.2

AAACTGGACCTGCAACAGGGACATGAATTTACTGCARGGTCTGAGCAAGCTCAGCCCCTCT
ACCTCAGGGCECCACAGCCATGACTACCTCCCCCAGGAGCGGGAGGGTGAAGGGGGCCTG
TCTCTGCAAGTGGAGCCAGAGTGGAGGAATGAGCTCTGAAGACACAGCACCCAGCCTTCT
CGCACCAGCCAAGCCTTAACCTGCCTGACCTGAACCAGAACCAGCTGAACTGCCCC
TCCAAGGGACAGGAAGCCTGGGGGAGGGAGTTTACAACCCAAGCCATTCCACCCCTCCC
CTGCTGGGGAGAATGACACATCAAGCTGCTAACAATTGGGGGAAGGGGAAGGAAGAAAA
CTCTGAAAACAAAATCTTGT

13722.3

CATGCGTTTTACCACTGTTGGCCAGGCTGGTCTCGAACTCCTGGCCTCAAGCAATCCACCC
GCCTCAGCCTCCAAAAGTGTCTGGGATTACAGATGTGAGCCATGGCACCATGCCAAAAGGC
TATATTCTGGCTCTGTGTTCCGAGACTGCTTTAATCCCAACTTCTCTACATTAGATTA
AAAAATATTTTATTTCATGGTCAATCTGGAACATAATTACTGCATCTTAAGTTTCCACTGAT
GTATATAGAAGGCTAAAGGCACAATTTTTATCAAACTCTAGTAGAGTAACCAACATAAAA
TCATTAATTACTTTCAACTTAATAACTAATTGACATTCTCAAAAGAGCTGTTTTCAATCCT
GATAGGTTCTTTATTTTTTCAAAATATAATTGCCATGGGATGCTAATTGCAATAAGGCGC
ATAATGAGAATACCCCAAACCTGGA

13722.4

GTTGGACCCCCAGGGACTGGAAAGACACTCTTCCCCGAGCTGTGGCGGGAGAAGCTGAT
GTTCCTTTTTATATGCTTCTGGATCCGAATTTGATGAGATGTTTGTGGGTCTGGGAGCCAG
CCGTATCAGAAATCTTTTAGGCAAGCCAAAGCCGAATGCTCCTTGTGTTATATTTATTGAT
GAATTAGATTCTGTTGGTCCGAAGAGAAATGAATCTCCAATGCATCCATAATCAAGGCAGA
CCATAATCAACTTCTTGGCTGAAATGGATGGTTTTAAACCCAATGAAGGAGTTATCATAAT
AGGAGCCACAACCTTCCCAGAGGCAATAGATAATGCTTAAATACCGTCTGTTGTTTTGA
CATGCAAGTTACAGTTCCAAGCCAGATGTAAGGCTCGAACAGAAATTTGAAATGGTA
TCTCAATAAAAATAAGTTTGATCAATCCCGTTGATCCAGAAATTATAGCCTCGAGGTACTG
GTGGCTTTTCCGGAAGCAGAGTTGGGACAATCTT

13724-13698-13748

GCCTACAACATCCAGAAAGAGTCTACCTGACCTGGTCTSCGTCTCAGAGGTGGGATGC
AGATCTTTCGTGAAGACCCCTGACTGGTAAGACCATCACTCTCGAAGTGGAGCCGAGTGACA
CCAATGAGAACGTCAAAGCAAGATCCARGACAAGGAAGGCRTYCCTCCTGACCAGCAGA
GGTTGATCTTTCCCGGAAGCAGCTGCAAGATGGDCCGACCCTGTCTGACTACAACATCC
AGAAAGAGTCTYACCCCTGCACCTGGTCTCCTGCTCTCAGAGGTGGGATGCCARATCTTCGTGA
AGACCCCTGACTGGTAAGACCATCACTCTGAGGTGGAGCCCAAGTGACACCATCGACAATG
TCAAGCCAAAGATCCAAGATAGGAAGGCAATCCCTCCTGATCAGCAGAGGTTGATCTTTG
CTGGGAACAGCTGGAAGATGCAAGCCACCTGTCTGACTACAACATCCAGAAAGAGTCCA
CTCTGCACTTGGTCTCTGCGCTTGAGCGGGGGGTGTCTAAGTTTCCCTTTTAAGGTTTCMAC
AAATTTCAATTGCACTTTCTTTCAATAAAGTTGTTGCAATCCC

FIG. II

13730.1

GAACTGGGCTCTGAGCCCAAGTCATGCCTTGTGTCCGCATCTGCCGTGTACCTCTGKCC
TGCCCCCTACCCCTCCCTCCTGGTCTTCTGAGCCAGCACCATCTCCAAATAGCCTATTCTT
CCTGCAAATCACACACACATGCGGGCCACACATACCTGCTGCCCTGGAGATGGGGAAGTA
GGAGAGATGAATAGAGGGCCCATACATTGTACAGAAGGAGGGGCAGGTGCAGATAAAAGC
AGCAGACCCAGCGGCAGCTGAGGTGCATGGAGCACGGTTGGGGCCGGCATTGGGCTGAGC
ACCTGATGGGCTCATCTCGTGAATCCTCGAGGCAGCGCCACAGCAGAGGAGTTAAGTGG
CACCTGGGCGGAGCAGAGCAGGAGACTGAGGGTCAGAGTGGAGGCTAAGCTGCCCTGGA
ACTCCTCAATCTTGCTGCCCTCTAGTATGAAGCCCCCTTCTGCCCTACAATTCTGA

13732.1

ATGGATCTTACTTTGCCACCCAGGTTGGAGTGCAGTGCTGCAATCTTGGCTCACTGCAGCC
TTAACCTCCCAGGCTCAAGCTATCCTCCTGCCAAAGCCTTCCACATAGCTGGGACTACAGG
TACACNGCCACCACACCCAGCTAAAATTTTTGTATTTTTGTAGAGACGGGATCTCGCCAC
GTTGCCAGGCTGGTCCCATCCTGACCTCAAGCAGATCTGCCACCTCAGCCCCCAACGT
GCTAGGATTACAGGCGTGAGCCACCCACCCAGCCTTTGTTTTGCTTTAATGGAATCACC
AGTTCCCTCCGTGTCTCAGCAGCAGCTGTGAGAAATGCTTTGCATCTGTGACCTTTATGA
AGGGGAACCTTCCATGCTGAATGAGGGTAGGATTACATGCTCCTGTTCCCGGGGGTCAAG
AAAGCCTCAGACTCCAGCATGATAAGCAGGGTGAG

13732.2

ATAGGGGCTTTAAGGAGGGAAATTCAGGTTCAATGAGGTGTAAGGCCAGGGCTCTTATCC
AGTAAGACTGGGGTCTTACATGAGAAAGAGACACCCGAGGTCTTCTCTCTGCCGTGTG
AGGATGCATCAAGAAGCGGGCCCTGTGCAAGCGAAGGAGAGGCCGACCAAGAAACCGAC
ACCTTCATCTTGGACTTGCAGCCTCTAGAAGTGAAGAAATAACTGTCTGTTGGTTAAGCCA
CCAGTTTGTAGTATCTCTTATGGCTTCCTAAGCAGACTAACAAACAAACACCCAAAATT
AACTGATGGCTTCGGCTGTCTTCTGTAAATAATGCTATGAGAGAATTTCACTCACTGTTTT
GCAGTTTCTCCCTCAGTCCCTGGTCTTCTTCTCACATAATCCCAATTTCAATTTATAGTTC
ATGGCCCAGGCAGAGTCAATTCATCAGGGCATCTCTGAGCTAAACCAGCACCTGCTCTGCT
CACTTCTTGAAGTGGCTGCTCATCATCAGCCCTCTTGCAGAGATTTCAATTTCTCCCGTGCCA
GGTACTTCACGCACCAAGCTCA

FIG. 1M

13735.1

GGATAATGAAGTTGTTTTATTAGCTTGGACAAAAAGGCATATTCCTCTATTTTCTTATACA
ACAAATATCCCCAAAATAAAGCAAGCATATATCTTGAATGTGTAATAATCCAGTGATA
AACAAGAGCAGTACTTTAAAAGAAAAAAATATGTATTTCTGTCAGGTTAAAAATGAGAA
TCAAAACCACTTACTCTGCTAACTCATTATTTTTGCTTTCTTTTGGTTAAGAGAGGCAAT
GCAATACACTGAAAAAGGTTTTATCTTATCTGGCATTGGAATTAGACATATTCAAACCCC
AGCCCCCATTTCCAACTTTAAGACCACAAACAAAGTAAATTTACTTTTCTGAACATTGGTTTT
TTCTGGAAAAATGGGAATTATAAAATAGACTTTGCAGACTCTTATGAGATTAAATAAGATA
ATGTATGAAATTCTTTCTTTCTTTTACTTTCTTTTCTTTTGGAGATGGAGTCTCACCCCGT
CACCCAGGCTGGAGTACAGTG

13735.2

CCACTGCACTCCAGCCTGGGTGACGGAGTGAGACTCTGTCTCAAAAAACAAACAAACAA
ACAAACAAAAAACTGAAAAGGAATAGAGTTCTCTTTCTCTCATATATGAATATATTTATTT
CAACAGATTGTTGATCACCTACCATATGCTTGGTATTGTTCTAATTGCTGGGGATACAGCA
AGAGGTTCTGCAGAACTTCATGGAGCATGAAAGTAAATAAACAAAGTTAATTTCAAGGCC
AGGCATGGTTGCTCACACCTTTAGTCCCAGCACTTTGGGAGGCTGAGCCAGGTGGATCACT
TGGGCCCAGGAGTTCAAGGCTGCCAGTGAGCCAAGATTGTGCCACTACTCTCCAGGCTGGG
CAACAGACCAAGACCTGTCTCAGGGGGAACAAAAAGTTAATTTAGATTGTTTAAAGTG
CTGTAAGGAAGTAAATAGGTTGATAATCAAGAGAGCACCTGAAGGCCAGGCGTGGTGGC
TCACGCTGTGGTCTAACGCTTTGGGAAGCCCGAGCGGGCGGATCACAAAGGTCAGGAGAA
TTTTGGCCAGGCATGGTG

13736.1

AGAATCCATTTATTGGGTTTTAACTAGTTACACAACCTGAAATCAGTTTGGCACTACTTTA
TACAGGGATTACGCTGTGTATCCCGACACTTAAATACTGTACCAGGACCACTGCTGTGCT
TAGGTCTGTATTCACTCATTACCATGTAGATACTAAAAATATACTGTAGTGTCTCTTTAA
GGAAGACTGTACAGGGTGTGTGCAAGATGACATTCACCAATTTGTGAATTATTTCAACCC
AGAAGATACCTTTCACTCTATAAACTTGTATAGGCAAAATGTGGTGTAGCATTCAGAG
ATGCCACACAAAAATGTTACATAAAAGTTGAGACATTTCTAATGATAAGTGAACCTGAAAAAA
AAAAAAACCCCACTCTCAAATTTGTAAACAAGATAAAGAAAAATAATTTAAAAACACAAA
AAATGGCATTCACTGGGTACAAAGCC

13737.1&2

CAAATATTTAATATAAATCTTTGAAACAAGTTGAGAKGAAATAAAAAATCAAAGTTTGCAA
AAACGTGAAGATTAACTTAATTTGTCAAAATATCTCTATTGCCCCAAATCAGTATTTTTTTA
TTTCTATGCAAAAGTATGCCCTTCAAACCTCTTAAATGATATATGATATGATACACAAACCA
GTTTTCAAATAGTAAAGCCAGTCACTTTGCAATTTGTAAGAAATAGGTAAGAAAGATTATAAG
ACACCTTACACACACACACACACACACACACACAGTGTGCACGCCAATGACAAAAAAC
AATTTGGCCTCTCCTAAAAATAAGAACATGAAGACCCTTAATTGCTGCCAGGAGGGAACAC
TGTGTACCCCTCCCTACAAATCCAGGTACTTTCTTTAATCCAATAGCAAATCTGGGCATAT
TTGAGAGGAGTGAATCTGACAGCCACSGTTGAAATCCTGTGGGGAACCATTCATGTCCACC
CACTGGTGGCCTGAAAAATGCCAATAATTTTCGCTCCCAGTTCTGCTGCTGTCTCTTCCA
CATCCTCACATAGACCCCGAGCCCGCTGGCCCTGGCTGGGCATGCCATTGCTGGTAGAGC
AAGTCATAGGTCTGTCTTTGACGTACAGAAGCGATACACCAAATTCCTGGTGGTCAAT
TGTCATAACCAG

FIG. 1N

13738.1

TTTGACTTTAGTAGGGGTCTGAACTATTTATTTTACTTTGCCMGTAAATTTARACCYTATA
TATCTTTTCATATGCCATCTTATCTTCTAATGBCAAGGGAACAGWTGCTAAMCTGGCTTCT
GCATTWATCACATTAATAAATGGCTTTCTTGGAAAAATCTTCTTGATATGAATAAAGGATCTT
TTAVAGCCATCATTTAAAGCMGGNTTCTCTCCAACACGAGTCTGCTASGGGGGGKGAGCT
GTGAACTCTGGCTGAAGGCTTTCCCATACACACTGCAATGACMTGGTTTCTGACCAGBGTG
AGTTA

13738.2

AGAGAAGCCCCATAAATGCAATCAGTGTGGGAAGGCCTTCAGTCAGAGCTCAAGCCTTTT
CCTCCATCATCGGGTTCATACTGGAGAGAAACCCTATGTATGTAATGAATGCGGCAGAGCC
TTTGGTTTTAACTCTCATCTTACTGAACACGTAAGGATTACACAGGAGAAAAACCCTATG
TTTGTAAATGAGTGGCGCAAGCCTTTCTGTCGGAGTTCCACTCTTGTTCAGCATCGAAGAGT
TCACACTGGGGAGAAAGCCCTACCAGTGGTGAATGTGGGAAAGCTTTCAGCCAGAGCTC
CCAGCTCACCCCTACATCAGCCGAGTTCACACTGGAGAGAAGCCCTATGACTGTGGTGACTG
TGGGAAGGCCTTCAGCCGGAGGTCAACCCTCATTACAGCATCAGAAAGTTTCACAGCGGAGA
GACTCGTAAGTGCAGAAAACATGGTCCAGCCTTTGTTCATGGCTCCAGCCTCACAGCAGAT
GGACAGATTCCCCTGGAGAGAAGCACGGCAGAACCCTTAACCATGGTGCAAAATCTCATT
CTGGCTGGACAGTTT

13739.1&2

GAGACAGGCTCTCACTTTGTACCCAGGCTGGAATGSCAGTGGTGGGATCTTACGTACCTCA
CTGCAGCCCTGACCTCTCTGCACTCAAAACAAATCTCTGCTCAGCCCTGCAAGTAGCTGGG
ACTGTGGGTGCAATGCCACCATGGCTGCTTAACTTTGTAGTTTTGTAAAGATGGGGTTTTT
GCCATGTTGCACATCCTGCTGCTGAACCTCTGAGCTCAAACGATCTGCCCCACCTCGGCCTC
CCAGAATGTTGGGATTACAGGGGTAAACCACGCGCTGGCCCCATTAGGGTATTTCTTAGC
ATCCACTTGGCTCACTGAGATTAATCATAGAGATGATAAGCACTGGAAGAAAAAATTTTT
ACTAGCCTTTGGATATTTTCTTTTTCAGCTTTATACAGAGGATTGGATCTTTAGTTTTT
CTTTAACTGATAATAAAACAATGAAGGAAATAAGTTTACCTGAGATTACAGAGATAAC
CGGCATCACTCCCTTGGCTCAAATCCAGTCTTTACCATCAATTAATTTTACAGAGGTGCAGGA
TAAAGCCCTTTAGTCTGCTTTGGCAGTTTTCTTCCACTTTTTGTAAACCTGTTGCCTGACA
AATGGAATTGACAGCGTATGCCATGACTATCCATTTGTACGCCATACGCTGTCAATTTTT
CCACCAATCCCTTGTCTCTCTTTGGAGAGATCTTCTTATCAGCTAGTCTTTGGCAAAAGTA
ATTGCAACTTCTTCTAGGTATTTCTATTGTCCGTTCCACTGCTGGAACCCCTGGGACCAGGA
CTAAAACCTCCAG

13741.1

ATCTCATATATATATTTCTTCTGACTTTATTTGCTTGGTTCTGNCACGCCATTTAAAAATATC
ACAGAGACCAAAATAGAGCGGCTTCTGCTGGAAACGATGGCAGTCACAGGACAAAAATAC
AAAACCTAGGGGGCTCTGTCTTCTCATACATCAATTTTCAAGTATTTTTTTATGTACA
AAGAGCTACTCTATCTGAAAAAAAATTAATAAATAAATGAGACAAATAGTTTATGCATC
CTAGGAAGAAAGATGGGAAGAAAGAACGGGGCAGTTGGGTACAAATTCCTGTCCCCGTGT
TCCCAGGGACCACTACCTTCTGCCCAGTBAITCCCCACAGCCTCACCCATCATGTACACA
GGCAAGTGCCAGGGTAGGTGGGGACCAAGTGGAGACAGGAACCAACATACTTTGGC
CTGGAAGATAAGGAGAAAGTCTCAGAAACACACTGGTGGGAAGCAATCCCACNGGCCGT
GCCCCANGAGCTTCCCACCTGCTGCTGCTTCCCTGGGTGGCTTTTGGGAACAGCTTGGGCAG
GCCCTTTTGGGTGGGGNCCAACCTGGCCCTTTGGGCCCCGTGTGGAAG

FIG. 10

13742.1

AAACATTGAGATGGAATGATAGGGTTTCCCAGAATCAGGTCCATATTTTAACTAAATGAA
AATTATGATTTATAGCCTTCTCAAATACCTGCCATACTTGATATCTCAACCAGAGCTAATTT
TACCTCTTTACAAATTAATAAGCAAGTAACTGGATCCACAATTTATAATACCTGTCAATT
TTTTCTGTATTAAACCTCTATCATAGTTTAAGCCTATTAGGGTACTTAATCCTTACAAATAA
ACAGGTTTAAAAATCACCTCAATAGGCAACTGCCCTTCTGGTTTTCTTTTGAATAACAAT
CTGAATGCTTAAGATTTTCCACTTTGGGTGCTAGCAGTACACAGTGTTACACTCTGTATTCC
AGACTTCTTAAATTATAGAAAAAGGAATGTACACTTTTTGTATTCTTTCTGAGCAGGGCCG
GGAGGCAACATCATCTACCATGGTAGGGACTTGTATGCATGGACTACTTTA

14351.1

ACTCTGTGCGCCAGGCTGGAGCCCBTGGMCGGATCTCGACTCCCTGCAAGCTMCGCCTC
ACAGGWTGATGCCATTCTCTGCTCAGCATCTGGAGTAGCTGGGACTACAGGCGCCAGC
CACCATGCCCAGCTAATTTTT

14351.2

ACCTTAAAGACATAGGAGAAATTAATACTGGGAGAGAAAGCTTACAAATGTAAGGTTTCTG
ACAAGACTTGGGAGTGAATCACACCTGGAAACAACATACTGGACTTCACACTGGABAGAAA
CCTTACAAGTGTAATGAGTGTGGCAAGGCTTTGGCAAGCAGTCAACACTTATTCACCATC
AGGCAATTCA

14354.2

AGTCAGGATCATGATGGCTCAGTTTCCACAGCGATGAATGGAGGGCCAAATATGTGGGC
TATTACATCTGAAGAACCTACTAAGCATGATAAACAGTTTGATAACCTCAAACCTTCAGGA
GGTTACATAACAGGTGATCAAGCCCTACTTTTCTACAGTCAGGTCTGCCGGCCCCCGG
TTTTAGCTGAAATATGGGCCCTATCAGATCTGAACAAGGATGGGAAGATGGACCAGCAAG
AGTTCTCTATAGCTATGAAACTCATCAAGTTAAAGTTGCAGGGCCAAACAGCTCCCTGTAGT
CCTCCCTCCTATCATGAAACAACCCCTATGTTCTCTCCACTAATCTCTGCTCGTTTTGGGA
TGGGAAGCATGCCCAATCTGTCCAATCATCAGCCATTGCCTCCAGTTGCACCTATAGCAAC
ACCCTTGTCTTCTGCTACTTCAGGGACCAGTATTCCTCCCTAATGATGCCTCCT

14354.1

CTTTCGATTTCTTCAATTTCTCAGCTTTCAATTAATGAAGTTGTTCAAGGGCTAACTGCTG
TGTAATTATAGCTTTCTCTGAGTTCTTCAGCTGATTTGTTAAATGAATCCATTCTGAGAGCT
TAGATGCAGTTTCTTTTCAAGAGCATCTAATTTCTTTAAGTCTTTGGCATAATTCTTCC
TTTTCTGATGACTTTCTATGAAGTAAACTGATCCCTGAATCAGGTGTGTTACTGAGCTGCAT
GTTTTTAATTTCTTTCTTTAATACCTGCTTCTCAGGGACCAGATAGATAAGCTTATTTTGAT
ATTCTTAAGCTCTTGGTGAAGTTGTTCAATTCATAATTTCCAGGTACACTGGTTATCC
CAAACCTCT

FIG. 1P

16431.1.2

GTGGAGGTGAAACGGAGGCCAAGAAAGGGGGCTACCTCAGGAGCGAGGGACAAAGGGGGC
GTGAGGCACCTAGGCCGCGGCACCCCGCGACAGGAAGCCGTCTGAACCGGGCTACCGG
GTAGGGGAAGGGCCCGCGTAGTCCTCGCAGGGCCCCAGAGCTGGAGTCGGCTCCACAGCC
CCGGGCGCGTCGGCTTCTCACTTCCTGGACCTCCCCGGCGCCCGGGCTGAGGACTGGCTCG
GCGGAGGGAGAAGAGGAACAGACTTGAGCAGCTCCCCGTTGTCTCGCAACTCCACTGCC
GAGGAACCTCATTTCTTCCCTCGCTCCTTACCCCCACCTCATGTAGAAAGGTGCTGAA
GCGTCCGGAGGGAAGAAGAACCTGGGCTACCGTCTGGCCTTCCCMCCCCCTTCCCGGGG
CGCTTTGGTGGGCGTGGAGTTGGGTTGGGGGGTGGGTGGGGGTTCTTTTTGGAGTGCT
GGGGAACCTTTTTCCCTTCTTCAGGTGAGGGGAAAGGGAATGCCCAATTCAGAGAGACAT
GGGGGCAAGAAGGACGGGAGTGGAGGAGCTTCTGGAACCTTTCAGCCGTCATCGGGAGG
CGGACGCTCTAACAGCAGAGAGCGTCAACGCTTGGTATCGAAGCACAAGCGGCATAAGTC
CAAACACTCCAAAGACATGGGGTTGGTGACCCCCGAAGCAGCATCCCTGGGCACAGTTAT
CAAACCTTTGGTGGAGTATGATGATATCAGCTCTGATTCCGACACCTTCTCCGATGACATG
GCCTTCAAACCTAGACCGAAGGGAAGGACGAACGTCGTGGATCAGATCGGAGCGACCGC
CTGCACAAACATCGTCAACCACCAGCACAGGCGTCCCCGGGACTTACTAAAAGCTAAACAG
ACCG

16432-1

GACATGTTTCCCTGCAGGGGACCAGACACAATGGGATTAGCCAGTGCTCACTGTTCTTTAT
GCTTCCAGAGAGGATGGGGACAGCTCTCAGGTGAGAATCCAGGCTGAGAAGGCCATGCTG
GTTGGGGCCCCCGGAAGCAGCGTCCGATCCTCCCTGGCATCAGCGTAGACCCGCTGCTC
AGGCTTGGGGTACCAAACTCATGCTCTGTACTGTTTTGGCCCCATGCGGTGAGAGGAAAAC
CTAGAAAAGATTGCTCGTCTAAGGAATCAGCTGCCCCCTCATCCTCCGCAATCCAAATGCT
GGTGACAACATAATCCCTCTCCAGGACACAGACTCGGTGACTCCACACTGGGCTGAGTGG
CCTCTGGAGGCTCGTGGCCTAAGGCAAGGCTCCGTAAGGCTGATCGGCTCAACTGGGTGG
GGTCAGGGTTTCTGACCCTTCCCTTCCCATCCCATAAACCGCTGTCAATGAGCTCACACTGT
GGTCA

16432-2

GATGGCATGGTCGTTGCTAAATGTCCTGCTGGGATGGAGCACTTCCTCCTGTGAGCCCAGG
GGACCCGCTGTCCCTGGAGCTTGGGGCAAGGAGGGAAGAGTGATACCAGGAAGGTGGG
GCTGCAGCCAGGGGCCAGAGTTCAGGCAAGTGCTCCTCCGCCCTCAAAGCTCCTCCG
GGGACTGCTCAGGAGTGATGGTGCCCTGGAGTTTGGCCCCAACTTCCCTGGCCACCCTGGAA
GGTGCTGCTGCTCCAGGCTCTAGGCTGGGCTGATGGGTTTCTCCAGGACACAAGTATC
ATTAAAGCCACCCTCTCCTCAGCTTGTAGGCCCCACATGTGGGACAGGCTGTGCTCACA
CCCCCTGGCCTGCCCCCTCCATCAGGAGGAGCCAGTGGAACCTTCGGAAAGCTCCCAG
CATCTCAGCAGCCCTCAAAGTGGTCTCTGGGCAAGCTCTGCTCTCTGACTGGAGGTCA
TCTGGGCTTGGCCTGCTCTCTCTCC

17184.3

TAAAAAAGTGTAACAAAGGTTTATTAGACTTTCTTCATGCCCCCAGATCCAGGATGTCTA
TGTAACCGTTATCTTACAAAGAAAGCACAATATTGGTATAAACTAAGTCACTGACTTGC
TAACTGAAATAGCGTCCATCCAAAGTGGGTTTAAAGGTAAAACCTGACGATATTGGC
GGGATCTCTGAGTTTGGACTGCTTCCCGGTTTGTCCAGGCTTCCGGGTCTGTTCTTGGC
ACTCATGGGACAGGCATCCTGCTCTGTGGGGCCCCGCTGGAGCCCTTACGTGAAGCT
GAAGGTATCGACCTAGGGGGCTCTAGGCGAGTGGACCTTCATCCGGAACATAACAAGGG
TCGGGGACAGGCCTCTTGGGCTATGTGGC

FIG. 1Q

17184.4

CAAGCGTTCTTTATGGATGTAAATTC.AAACAGTCATGCTGAGCCATCCCCGGGCTGACAGT
CACGTTWAAGACACTAGGTCCGGCCGCCACAGTGCCACCCAAGGAGAAGAAGAAATTTGGA
ATTTTCCATGAAGATGTACGGAAATCTGATGTTGAATATGAAAATGGCCCCAAATGGAA
TTCC.AAAAGGTTACCACAGCGGCTGTAAGACCTAGTGACCCCTCTAAGTGGGAAGAGGA
ATGGAGAATAGTATTTCTGATGCATCAAGAACATCAGAAATATAAACTGAGATCATAATG
AAGGAAAAATCCATATCCAATATGAGTTTACTCAGAGACAGTAGAACTATTCCCAGG

17185.1

TAGGAATAACAAATGTTTATTCAGAAATGGATAAGTAATACATAATCACCCCTTCATCTCTT
AATGCCCTTCTCTCTCTCTGACAGGAGACACAGATGGGTAAACATAGAGGCATGGGAA
GTGGAGGAGGACACAGGACTAGCCCACCTTCTCTTCCCGGTCTCCCAAGATGACTGCT
TATAGAGTGGAGGAGGCAACAGGTCCCTCAATGTACCAGATGGTCACCTATAGCACCA
GCTCCAGATGGCCACGTGGTTGCACTGGACTCAATGAACTCTGTGACAACCAGAAGAT
ACCTGCTTTGGGATGAGAGGGAGGATAAAGCCATGCAGGGAGGATATTTACCATCCCTAC
CCTAAGCACAGTGCAAGCAGTGAGCCCCCGGCTCCAGTACCTGAAAAACCAAGGCCTAC
TGNCCTTTGGATGCTCTCTTGGGCCACG

17188.2

AAGCCTCCTGCCCTGGAAATCTGGAGCCCTTGGAGCTGAGCTGGACCGGGCAGGGAGGG
GCTGAGAGGCAAGACCGTCTCCTCTCTCTGACCTGCTTCCCCAGCAGCCACTGCTGGGC
ACAGCAGAAACGCCAGCAGAGAAATGGGAGCGAGAGTCTTAGCCCTGGAGCTGAGG
CTGCCTCTGGGCTGACCCGCTGCTCTACGTGGCCAGA.ACTGGCGTGGCATCTGCCATCC
ATTTGAGGCCAGGGTGGAGGAAAGGGAGGCCAAGCAGAGGAAACCTATTCCTGCTGTGAC
AACACAGCCCTTGTCCACGCCAGCCTAAGTGGAGGGAGCGTGATGAAGTCAGGCAGCCAG
TCGGGGAGGAGGAGGTAACCTCAGCAGCAATGTCACCTTGTAGCCTATGCGCTCAATGGCC
CGGAGGGGCCAGCAACCCCCCGCACAGCTCAGCCAAACAGCAGTGCCTCTGCAGGCACCAAG
AGAGCGATGATGGACTTGAGCCCTGTTT

17190.1

GTTTGGCAGAAGACATGTTAAATAACA.TTT.CATAATTA.AAAATACAGCAACAATCTCT
ATCTGTCCACCATCTTGCCTTCCCTTCTCGGGCTGAGGCAGACAAAGGAAGGTAATGA
GGTTAGGGCCCCCAGCCGGGCTAAGTGCTATTGGCCTGCTCCTGCTCAAAGAGAGCCATA
GCCAGCTGGGCACGCCCCCTAGCCCCCTCAGGTTGCTGAGCCGGCAGCGGTGGTAGAGT
TCTTCACTGAGCCGTGGGCTCCAGTCTCTCCAGGGAGA.ACTTCTGCACCAGCCCTGCTCTA
CGCCCGAAAGAGGTGGAGCCCTGAGAACGGGAGGAAACATCCATCACCTCCAGCCCCCT
CCAGGGCTTCTCTCTCTCTCTGCGCTCCAGTTCACTTCCAGCCGGGCTCGGGCCGCCAG
GTACTCAGCGTTGTAGAAGCAGCCCTCCGAGAAAGCCTGCCCGTCAAATCTCCCCGCTATA
GGAGCCCCCCCCGGGAGGGGTACCAACC

FIG. 1R

17190.2

CAAGTTGAACGTCAGGCTTGGCAGAGGTGGAGTGTAGATGAAAACAAAGGTGTGATTATG
AAGAGGATGTGAGTCCTTTGGGTGTAGGAGAGAAAGGCTGTTGAGCTTCTATTTCAAGAT
ACTTTTACCTGTGCAAAAAGCACATTTTCCACCTCCTTCTCATGGCATTGTGTAAAGGTGAG
TATGATTCTTATTCATCTGCATTTTAGAGGTGAAGAATAACGTACAAGGGATTCAAGTGAT
TAGCAAGGGACCCCTCACTAAGTGTTGATGGAGTTAGGACAGAGCTCAGCTGTTTGAATCT
CAGAGCCCAGGCAGCTGGAGCTGGGTAGGATCCTGGAGCTGGCACTAATGTGAGGTGCAT
TCCCTCCAACCCAGGCTCAGATCCGGAACCTGACCGTGCTGACCCCCGAAGGGGAGGCAG
GGCTGAGCTGGCCCGTTGGGCTCCCTGCTCCTTTACACCACACTCTCGCTTTGAGGTGCTG
GGCTGGGACTACTTCACAGAGCAGC

17191.2&89.2

TGGCCTGGGCAGGATTGGGAGAGAGGTAGCTACCCGGATGCAGTCCTTTGGGATGAAGAC
TATAGGGTATGACCCCATCATTTCCCCAGAGGTCTCGGCCTCCTTTGGTGTTCAGCAGCTG
CCCCTGGAGGAGATCTGGCCTCTCTGTGATTTCACTGTGCACACTCCTCTCCTGCCCTC
CACGACAGGCTTGCTGAATGACAACACCTTTGCCAGTGCAAGAAGGGGGTGCGTGTGGT
GAACTGTGCCCCGTGGAGGGATCGTGGACGAAGGCGCCCTGCTCCGGGGCCCTGCAGTCTGG
CCAGTGTGCCGGGGCTGCACTGGACGTGTTTACGGAAGAGCCGCCACGGGACCGGGCCTT
GGTGGACCATGAGAATGTCATCAGCTGTCCCCACCTGGGTGCCAGCACCAAGGAGGCTCA
GAGCCGCTGTGGGGAGGAAATTGCTGTTCAAGTTCGTGGACATGGTGAAAGGGGAAATCTCT
CACCGGGGTTGTGAATGCCCAGGCCCTT

FIG. 1S

AGCCAGATGGCTGAGAGCTGCAAGAAGAAGTCAGGATCATGATGGCTCAGTTTCCACAG
CGATGAATGGAGGGCCAAATATGTGGGCTATTACATCTGAAGAACGTACTAAGCATGATA
AACAGTTTGATAACCTCAAACCTTCAGGAGGTTACATAACAGGTGATCAAGCCCGTACTTT
TTTCCTACAGTCAGGTCTGCCGGCCCCGGTTTTAGCTGAAATATGGGCCTTATCAGATCTG
AACAAGGATGGGAAGATGGACCAGCAAGAGTTCTCTATAGCTATGAAACTCATCAAGTTA
AAGTTGCAGGGCCAAACAGCTGCCTGTAGTCTCCCTCCTATCATGAAACAACCCCTATGT
TCTCTCCACTAATCTCTGCTCGTTTTGGGATGGGAAGCATGCCCAATCTGTCCATTTCAG
CCAATTGCCTCCAGTTGCACCTATAGCAACACCCCTTGTCTTCTGCTACTTCAGGGACCAGTAT
TCCTCCCCTAATGATGCCTGCTCCCCTAGTGCCTTCTGTTAGTACATCCTCATTACCAAATG
GAACTGCCAGTCTCATTACGCCCTTTATCCATTCTTATTCTTCTCAACATTGCCTCATGCA
TCATCTTACAGCCTGATGATGGGAGGATTTGGTGGTGCTAGTATCCAGAAGGCCCCAGTCTC
TGATTGATTTAGGATCTAGTAGCTCAACTTCTCAACTGCTTCCCTCTCAGGGAACCTCACCT
AAGACAGGGACCTCAGAGTGGGCAGTTCTCAGCCTTCAAGATTAAGTATCGGCAAAAA
TTTAATAGTCTAGACAAAGGCATGACCGGATACCTCTCAGGTTTTCAAGCTAGAAATGCCC
TTCTTCAGTCAAATCTCTCTCAAACCTCAGCTAGCTACTATTTGGACTCTGGCTGACATCGAT
GGTGACGGACAGTTGAAAGCTGAAGAATTTATTCTGGCGATGCACCTCACTGACATGGCC
AAAGCTGGACAGCCACTACCACTGACGTTGCCTCCCGAGCTTGTCCCTCCATCTTTCAGAG
GGGGAAGCAAGTTGATTCTGTAAATGGAACTCTGCCTTCATATCAGAAAAACACAAGAAG
AAGAGCCTCAGAAGAACTGCCAGTTACTTTTGAGGACAAACGGAAAGCCAACTATGAAC
GAGGAAACATGGAGCTGGAGAAGCGACGCCAAGTGTTGATGGAGCAGCAGCAGAGGGAG
GCTGAACGCAAGGCCAGAAAGACAAGGAAGAGTGGGAGCGGAAACACAGAGAACTGC
AAGAGCAAGAATGGGAAGAAGCAGCTCGAGTTGGAGAAACGCTTGGAGAAACAGAGAGAG
CTGGAGAGACAGCGCGAGGAAGAGAGCGAGAAAGGAGATAGAAAGACGAGAGGCAGCAA
AACAGGAGCTTGAGAGACAACGCCGTTTTAGAATGGGAAAGACTCCGTCGGCAGGAGCTGC
TCAGTCAGAAGACCAGCGAACAAGAACACATTGTACGGCTGAGCTCCAGAAAGAAAAGT
CTCCACCTGGAAGCTGGAAGCAGTGAATGGAAAACATCAGCAGATCTCAGGCAGACTACAA
GATGTCCAAATCAGAAAGCAAAACACAAAAGACTGAGCTAGAAGTTTGGATAAACAGTGT
GACCTGGAAATTAAGAAAACAAACAACTTCAACAAGAGCTTAAGGAATATCAAAATAAG
CTTATCTATCTGGTCCCTCAGAACGAGCTATTAAACGAAAGAAATTAACAAATGCAGCTCA
GTAACACACCTGATTACGGGATCAGTTACTTTCATAAAAAATCATCAGAAAAGCAAGAAAT
TATGCCAAAGAGCTTAAGAAACAAATCAGCTGAAGGAACTCAGAGAAAGCTATAATACACAGC
CAGAAATGGATTCAATTAACAAATCAGCTGAAGGAACTCAGAGAAAGCTATAATACACAGC
AGTTAGCCCTTGAACAACTTCAAAAAACGCTGACAAAATTGAAGGAATCGAAAGAA
AAAGATTAGAGCAAAAAA

FIG. 2A

ATGGCAGTGACATTCACCATCATGGGAACACCTTCCCTTTTCTTCAGGATTCTCTGTAGTG
GAAGAGAGCACCCAGTGTTGGGCTGAAAACATCTGAAAGTAGGGAGAAGAACCTAAAAAT
AATCAGTATCTCAGAGGGCTCTAAGGTGCCAAGAAGTCTCACTGGACATTTAAGTGCCAA
CAAAGGCATACTTTTCGGAATCGCCAAGTCAAACTTTCTAACTTCTGTCTCTCTCAGAGAC
AAGTGAGACTCAAGAGTCTACTGCTTTAGTGGCAACTACAGAAAACTGGTGTTACCCAGA
AAAACAGGAGCAATTAGAAAATGGTTCCAATATTTCAAAGCTCCGCAAACAGGATGTGCTT
TCCTTTGCCCATTTAGGGTTTCTTCTTTCTTTCTTTTATTAACCACTA

FIG. 2B

ATATCTAGAAGTCTGGAGTGAGCAAAACAAGAGCAAGAAACAAAAAGAAGCCAAAAGCAG
AAGGCTCCAATATGAACAAGATAAATCTATCTTCAAAGACATATTAGAAGTTGGGAAAAT
AATTCATGTGAACTAGACAAGTGTGTTAAGAGTGATAAGTAAATGCACGTGGAGACAAG
TGCATCCCCAGATCTCAGGGACCTCCCCCTGCCTGTCACCTGGGGAGTGAGAGGACAGGAT
AGTGCAATGTTCTTTGTCTCTGAAATTTTATGTTATATGTGCTGTAATGTTGCTCTGAGGAAGC
CCCTGGAAAAGTCTATCCCAACATATCCACATCTTATATTCCACAAATTAAGCTGTAGTATG
TACCCTAAGACGCTGCTAATTGACTGCCACTTCGCAACTCAGGGGCGGCTGCATTTTAGTA
ATGGGTCAAATGATTCACTTTTTATGATGCTTCCAAAGGTGCCTTGGCTTCTCTTCCCAACT
GACAAATGCCAAAGTTGAGAAAAATGATCATAATTTTAGCATAAACAGAGCAGTCGGCGA
CACCGATTTTATAAATAAACTGAGCACCTTCTTTTAAACAAACAAATGCGGGTTTATTTCT
CAGATGATGTTTCATCCGTGAATGGTCCAGGGAAGGACCTTTCACCTTGACTATAATGGCATT
ATGTCATCACAAGCTCTGAGGCTTCTCCTTTCCATCCTGCGTGGACAGCTAAGACCTCAGT
TTTCAATAGCATCTAGAGCAGTGGGACTCAGCTGGGGTGATTTCCGCCCCCATCTCCGGGG
GAATGTCTGAAGACAATTTTGTACCTCAATGAGGGAGTGGAGGAGGATACAGTGCTACT
ACCAACTAGTGGATAAAGGCCAGGGATGCTGCTCAACCTCCTACCATGTACAGGACGTCTC
CCCATTACAACCTACCCAAATCCGAAGTGTCAACTGTGTCAGGACTAAGAAACCCTGGTTTTG
AGTAGAAAAGGGCCTGGAAAAGAGGGGAGCCAACAAATCTGTCTGCTTCTCACATTAGTC
ATTGGCAAATAAGCATTCTGTCTCTTTGGCTGCTGCCTCAGCACAGAGAGCCAGAACTCTA
TCGGGCACCAGGATAACATCTCTCAGTGAACAGAGTTGACAAGGCCTATGGGAAATGCCT
GATGGGATTATCTTCAGCTTGTTGAGCTTCTAAGTTTCTTTCCCTTCATTCTACCTGCAAG
CCAAGTTCTGTAAGAGAAATGCCTGAGTTCTAGCTCAGGTTTTCTTACTCTGAATTTAGATC
TCCAGACCTTCTCCTGCCACAATTCAAATTAAGGCAACAAACATATACCTTCCATGAAGCA
CACACAGACTTTTGAAAGCAAGGACAATGACTGCTTGAATTGAGGCCTTGAGGAATGAAG
CTTTGAAGGAAAAGAATACTTTGTTTCCAGCCCCCTTCCCACTCTTCATGTGTTAACCAC
TGCCTTCTGGACCTTGGAGCCACGGTGACTGTATTACATGTTGTTATAGAAAAGTGAATTT
AGAGTTCTGATCGTTCAAGAGAAATGATTAAATATACATTTCTA

FIG. 2C

TCGAGCGGCCGCCCCGGGCAGGTCCTTCAGACTTGGACTGTGTCACACTGCCAGGCTTCCAG
GGCTCCAACTTGCAGACGGCCTGTTGTGGGACAGTCTCTGTAATCGCGAAAGCAACCATG
GAAGACCTGGGGGAAAACACCATGGTTTTATCCACCCTGAGATCTTTGAACAACCTTCATCT
CTCAGCGTGCGGAGGGAGGCTCTGGACTGGATATTTCTACCTCGGCCGCGACCACGCT

FIG. 4

TAGCGYGGTCGCGGCCGAGGYCTGCTTYTCTGTCCAGCCCAGGGCCTGTGGGGTCAGGGC
GGTGGGTGCAGATGGCATCCACTCCGGTGGCTTCCCCATCTTTCTCTGGCCTGAGCAAGGT
CAGCCTGCAGCCAGAGTACAGAGGGCC.AACACTGGTGTTCTTGAACAAGGGCCTTAGCAG
GCCCTGAAGGRCCTCTCTGTAGTGTGAACTTCCTGGAGCCAGGCCACATGTTCTCCTCAT
ACCGCAGGYTAGYGATGGTGAAGTTGAGGGTGAAATAGTATTMANGRAGATGGCTGGCA
RACCTGCCCCGGCGGCCGCTCSAAATCC

FIG. 5

AGCGTGGTCGCGGCCGAGGTGTCCTTCAGGGTCTGCTTATGCCCTTGTTCAAGAACACCAG
TGCAGCTCTCTGTACTCTGGTTGCAGACTGACCTTGCTCAGGCCTGAGAAGGATGGGGCA
GCCACCAGAGTGGATGCTGTCTGCACCCATCGTCCTGACCCCAAAAGCCCTGGACTGGACA
GAGAGCGGCTGTACTGGAAGCTGAGCCAGCTGACCCACGGCATCACTGAGCTGGGCCCCCT
ACACCCTGGACAGGGACAGTCTCTATGTCAATGGTTTCACCCATCGGAGCTCTGTACCCAC
CACCAGCACCGGGGTGGTCAGCGAGGAGCCATTCAACCTGCCCCGGGCGGCCGCTCGA

FIG. 6

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A

TTGGGGNTTTMGAGCGGGCCGCGGGCAGGTACCGGGGTGGTCAGCGAGGAGCCATTAC
ACTGAACTTCACCATCAACAACCTGCGGTATGAGGAGAACATGCAGCACCCCTGGCTCCAG
GAAGTTCAACACCACGGAGAGGGTCCTTCAGGGCCTGCTCAGGTCCCTGTTCAAGAGCAC
CAGTGTGGCCCTCTGTACTCTGGCTGCAGACTGACTTTGCTCAGACTTGAGAAACATGGG
GCAGCCACTGGAGTGGACGCCATCTGCACCCTCCGCCTTGATCCCACTGGTCTGGACTGG
ACAGAGAGCGGCTATACTGGGAGCTGAGCCAGTCCTCTGGCGGNGACNCCNCTT

B

AGCGTGGTCGCGGGCCGAGGTCCAGTCCAGCATGCTCTTTCTCCTGCCCCACTGGCACAGTG
AGGAAGATCTCTGCTGTCAGTGAGAAAGGCTGTATCCACTGAGATGGCAGTCAAAAGTGC
ATTTAATACACCTAACGTATCGAACATCATAGCTTGGCCCAGGTTATCTCATATGTGCTCA
GAACACTTACAATAGCCTGCAGACCTCCCCGGGCGGCGGCTCGA

FIG. 7A and 7B

TGTGGTGTGAACTTCCTGGAGNCAGGGTGACCCATGTCCTCCCCATACTGCAGGTTGGTG
ATGGTGAAGTTGAGGGTGAATGGTACCAGGAGAGGGCCAGCAGCCATAATTGTSGRGCKG
SMGMSSGAGGMWGGWGTYYCWGAGGTTCYRARRTCCACTGTGGAGGTCCCAGGAGTGCT
GGTGGTGGGGACAGAGSTCYGATGGGTGAAACCATTGACATAGAGACTGTTCTGTCCAG
GGTGTAGGGGCCCAGCTCTTYRATGYCATTGGYCAGTTKGCTYAGCTCCCAGTACAGCCRC
TCTCKGYYGMGWCCAGSGCTTTTGGGGTCAAGATGATGGATGCAGATGGCATCCACTCCA
GTGGCTGCTCCATCCTTCTCGGACCTGAGAGAGGTCAGTCTGCAGCCAGAGTACAGAGGG
CCAACACTGGTGTTCCTTTGAATA

FIG. 8

TCGAGCGGCGCGCGGGCAGGTCAGGAAGCACATTGGTCTTAGAGCCACTGCCTCCTGGA
TTCCACCTGTGCTGCGGACATCTCCAGGGAGTGCAGAAGGGAAGCAGGTCAAAGTGTCA
GATCAGTCAGACTGGCTGTTCTCAGTTCTCACCTGAGCAAGGTCAGTCTGCAGCCAGAGTA
CAGAGGGCCAACACTGGTGTCTTGAACAAGGGCTTGAGCAGACCCTGCAGAACCCTCTTC
CGTGGTGTGAACTTCCTGGAACCAGGGTGTTCATGTTTTTCCTCATAATGCAAGGTTG
GTGATGG

FIG. 9

Gene Name	Bal Probe 11 Exp Name	Probe 2		GEN ID	Probe1 Value	Probe2 Value	Probe1		Probe2	
		P1	P2 Name				B/B	%	B/B	%
42100188 (D1)	17.0 205A Ovary T		270A Liver N	422100606	8620	1240	57.7	65	2.2	65
42100188 (D1)	18.9 274 Ovary Tumor		586 Spinal Cord N	422100628	5894	1002	35.3	89	3.9	89
42100188 (D1)	18.7 185A Ovary T		591 Fetal tissue	422X00647	12151	2124	54.3	71	2.8	71
42100188 (D1)	18.1 426A Ovary T (tunc)		415A Aorta N	422X00611	7487	1480	53.0	73	9.7	73
42100188 (D1)	18.5 261A Ovary Tumor		573 Breast T	422100623	7402	2116	39.2	84	4.5	84
42100188 (D1)	18.3 183A Ovary T (tunc)		11 Colon T	422100609	1714	1113	20.4	83	2.6	83
42100188 (D1)	18.0 933A Ovary T (tunc)		12 Skin T	422100641	2435	814	12.1	75	2.1	75
42100188 (D1)	18.6 181A Ovary T (tunc)		272A Dendritic cells	422100608	4578	1754	25.0	69	2.3	69
42100188 (D1)	18.2 261A Ovary Tumor		53 Pancreas N	422100609	7904	3506	18.5	81	5.6	81
42100188 (D1)	18.0 186A Ovary T		510 PBLK T (tunc)	422100605	2191	1081	14.0	90	2.9	90
42100188 (D1)	18.0 65A Ovary Tumor		310 Small intestine	422100604	1979	971	10.4	80	2.7	80
42100188 (D1)	18.0 151A Ovary Tumor		175 Head T	422100624	1911	964	13.9	93	1.4	93
42100188 (D1)	19.4 28A Ovary T (tunc)		52 Ovary T	422100626	1666	817	9.8	100	1.0	100
42100188 (D1)	18.6 261A Ovary Tumor		243A Esophagus T	422100612	1827	3400	11.4	97	0.5	97
42100188 (D1)	18.6 266A Ovary T		510 Skeletal muscle	422100604	5914	3653	30.4	86	6.0	86
42100188 (D1)	18.6 522 Ovary Tumor		527 Ovary T	422100603	2049	1274	11.9	50	2.6	50
42100188 (D1)	18.4 918A Ovary T (tunc)		179 Kidney T	422100627	4746	1072	11.0	92	4.0	92
42100188 (D1)	18.3 265A Ovary Tumor		918S P Ovary T (tunc)	422100602	4204	3074	23.0	93	7.7	93
42100188 (D1)	18.2 429A Ovary Tumor		111A Lung tissue	422100622	3002	2101	16.6	89	4.0	89
42100188 (D1)	18.2 182A Ovary T (tunc)		161A Ovary T	422100619	1643	1297	9.6	90	3.1	90
42100188 (D1)	18.2 288A Ovary Tumor		1719 Brain N	422100614	2521	2084	22.0	65	24.9	65
42100188 (D1)	18.1 201A Ovary Tumor		1712 Lung N	422100640	2072	1663	10.9	88	2.3	88
			56 Stomach T	422100625	1840	1474	10.7	87	3.8	87
				422100620	1429	1204	9.1	90	3.5	90

FIG. 10

Gene Name	Bal Probe 1		Probe 2		Gene ID	Probe1		Probe2		Probe1		Probe2	
	Exp Name	P1	Exp Name	P2		Value	B/B	Value	B/B	Value	B/B	Value	B/B
42100181 (C3)	18.8 185A Ovary T		591 Fetal tissue		422X0007	26711	1424	103.3	54	1424	103.3	54	2.0
42100181 (C3)	11.5 521 Ovary Tumor		586 Spinal Cord N		422X0028	13559	1179	65.3	68	1179	65.3	68	3.9
42100181 (C3)	11.1 476A Ovary T (unc)		415A Aorta F		422X0014	14125	1273	67.3	61	1273	67.3	61	5.6
42100181 (C3)	10.8 205A Ovary T		70A Liver N		422Q0006	16121	1488	93.1	41	1488	93.1	41	2.1
42100181 (C3)	15.1 261A Ovary Tumor		573 Breast N		42210023	11326	2235	58.2	68	2235	58.2	68	4.4
42100181 (C3)	14.6 051A Ovary T (unc)		222A Dendritic cell		42210008	6584	1424	24.5	40	1424	24.5	40	2.1
42100181 (C3)	14.4 261A Ovary Tumor		52 Pancreas F		422N0029	9865	2245	40.9	64	2245	40.9	64	3.6
42100181 (C3)	14.3 429A Ovary T (unc)		664A Ovary N		42210014	2803	618	22.6	60	618	22.6	60	7.4
42100181 (C3)	14.2 261A Ovary Tumor		510 Skeletal muscle		42210021	8271	1949	39.5	68	1949	39.5	68	3.6
42100181 (C3)	13.8 511S Ovary T (unc)		C710 Small intestine		42210004	2281	607	11.6	60	607	11.6	60	2.1
42100181 (C3)	13.5 265A Ovary Tumor		C75 Heart F		42210024	3192	1294	19.2	68	1294	19.2	68	4.0
42100181 (C3)	13.3 522 Ovary Tumor		C79 Kidney F		42210027	365	1276	3.6	70	1276	3.6	70	1.9
42100181 (C3)	12.2 266A Ovary T		572 Ovary F		42210013	2714	1260	14.1	46	1260	14.1	46	2.7
42100181 (C3)	12.1 9111 Ovary T (SCN)		12 Skin F		42210001	1774	847	8.4	56	847	8.4	56	2.1
42100181 (C3)	11.9 945A Ovary T		945S Ovary T (S)		422Y0002	6967	3726	41.5	70	3726	41.5	70	9.2
42100181 (C3)	11.6 482A Ovary T		C719 Heart N		42200010	2113	1471	6.2	50	1471	6.2	50	1.9
42100181 (C3)	11.5 525 Ovary Tumor		C712 Lung N		422X0025	1657	1054	9.7	69	1054	9.7	69	2.9
42100181 (C3)	11.4 262A Ovary Tumor		C71 Bone Marrow		42210019	848	1244	4.5	65	1244	4.5	65	2.7
42100181 (C3)	11.2 066A Ovary T		331A Large Intestine		422A0022	3171	2214	16.8	69	2214	16.8	69	3.8
42100181 (C3)	11.1 115A Ovary Tumor		540 PBMC T (unc)		42210005	610	544	4.2	53	544	4.2	53	1.9
42100181 (C3)	11.0 201A Ovary Tumor		S7 Ovary N		42220026	592	710	3.7	75	710	3.7	75	2.6
42100181 (C3)	11.0 429A Ovary T (unc)		56 Stomach N		422W0020	1197	1217	7.8	65	1217	7.8	65	3.5
42100181 (C3)	10.8 051A Ovary T (unc)		241A Esophagus F		42210012	783	797	4.5	95	797	4.5	95	2.4
			11 Colon F		42210009	3470	862	8.9	24	862	8.9	24	1.7

FIG. 11

Gen Name	Bal Probe 1 Exp Name	P1	P2 Name	Probe 2	QCM ID	Probe1 Value	Probe2 Value	Probe1 S/B	Probe1 A%	Probe2 S/B	Probe2 A%
42100182 (11/1)	116.7 426A Ovary T (met)	116.7 426A Ovary T (met)	426A Adip N	422X00611	422X00611	7706	462	46.3	75	4.5	75
42100182 (11/1)	110.7 205A Ovary T	110.7 205A Ovary T	270A Liver N	422X00606	422X00606	10171	950	61.2	41	1.8	41
42100182 (11/1)	19.9 185A Ovary T	19.9 185A Ovary T	591 Fetal tissue	422X00607	422X00607	14115	1459	62.1	48	2.2	48
42100182 (11/1)	18.8 533 Ovary Tumor	18.8 533 Ovary Tumor	586 Spinal Cord N	422X00628	422X00628	7781	880	47.3	71	1.4	71
42100182 (11/1)	16.4 161A Ovary T (met)	16.4 161A Ovary T (met)	11 Colon N	422H00609	422H00609	4807	748	27.6	47	2.2	47
42100182 (11/1)	15.1 263A Ovary Tumor	15.1 263A Ovary Tumor	571 Breast N	422H00623	422H00623	9815	1909	57.1	74	4.2	74
42100182 (11/1)	14.9 429A Ovary T (met)	14.9 429A Ovary T (met)	161A Ovary N	422H00614	422H00614	2661	543	20.3	61	6.7	61
42100182 (11/1)	14.5 264A Ovary Tumor	14.5 264A Ovary Tumor	572 Pancreas N	422H00629	422H00629	7914	2274	38.8	71	3.9	71
42100182 (11/1)	9.9 535 Ovary Tumor	9.9 535 Ovary Tumor	CT4 Bone Marrow	422H00619	422H00619	480	1175	3.5	80	3.0	80
42100182 (11/1)	12.8 261A Ovary Tumor	12.8 261A Ovary Tumor	510 Skeletal muscle	422H00621	422H00621	8994	1245	34.6	69	5.1	69
42100182 (11/1)	12.5 5115 Ovary T (met)	12.5 5115 Ovary T (met)	CT10 Small intestine	422H00601	422H00601	1864	708	8.1	67	2.2	67
42100182 (11/1)	12.3 9111 Ovary T (SCH)	12.3 9111 Ovary T (SCH)	12 Skin N	422H00601	422H00601	2552	1111	12.7	41	2.6	41
42100182 (11/1)	9.6 522 Ovary Tumor	9.6 522 Ovary Tumor	CT9 Kidney H	422H00627	422H00627	889	889	1.2	69	1.4	69
42100182 (11/1)	12.2 181A Ovary T (met)	12.2 181A Ovary T (met)	CT19 Ovarian cells	422H00606	422H00606	1516	1567	18.7	55	2.2	55
42100182 (11/1)	9.9 462A Ovary T	9.9 462A Ovary T	CT19 Ovary H	422H00610	422H00610	608	1190	4.2	60	2.3	60
42100182 (11/1)	11.8 266A Ovary Tumor	11.8 266A Ovary Tumor	CT5 Thym H	422H00604	422H00604	2063	1080	13.6	67	4.5	67
42100182 (11/1)	11.5 262A Ovary Tumor	11.5 262A Ovary Tumor	527 Ovary N	422H00603	422H00603	1550	847	7.0	58	2.1	58
42100182 (11/1)	1.4 466A Ovary T	1.4 466A Ovary T	44A Large Intestine	422X00622	422X00622	2559	1651	13.2	71	3.2	71
42100182 (11/1)	1.3 288A Ovary Tumor	1.3 288A Ovary Tumor	510 PHAIC Treated	422H00605	422H00605	511	748	3.9	62	2.2	62
42100182 (11/1)	1.1 335A Ovary Tumor	1.1 335A Ovary Tumor	CT12 Lung H	422H00626	422H00626	894	1120	5.1	66	1.1	66
42100182 (11/1)	0.12 9185 P Ovary T C	0.12 9185 P Ovary T C	57 Ovary H	422H00626	422H00626	440	567	3.3	60	2.2	60
42100182 (11/1)	11.1 428A Ovary T (met)	11.1 428A Ovary T (met)	9185 P Ovary T C	422X00602	422X00602	4188	3529	21.6	66	9.5	66
42100182 (11/1)	1.0 201A Ovary Tumor	1.0 201A Ovary Tumor	241A Esophagus N	422H00612	422H00612	725	689	6.2	65	2.8	65
42100182 (11/1)			56 Stomach H	422H00620	422H00620	1008	1018	7.4	62	3.2	62

FIG. 12

Gene Name	Bal Probe 1		P1	Probe 2		GEN ID	Probe1		Probe2	
	Exp Name	Exp Name		P2 Name	P2 Name		Value	B/B	Value	B/B
421V0089 (001)	11.2 426A Ovary T (met)	11.2 426A Ovary T (met)		415A Aorta N	422X0611		8072	55.2	243	2.4
421V0089 (001)	11.7 521 Ovary Tumor	11.7 521 Ovary Tumor		556 Spinal Cord N	422X0628		7467	42.6	517	2.5
421V0089 (001)	12.6 429A Ovary T (met)	12.6 429A Ovary T (met)		464A Ovary N	422X0614		2850	21.7	227	3.5
421V0089 (001)	18.0 485A Ovary T	18.0 485A Ovary T		S91 Fetal tissue	422X0607		11711	54.0	1469	2.2
421V0089 (001)	17.1 261A Ovary Tumor	17.1 261A Ovary Tumor		S71 Breast N	42210624		6949	37.8	952	2.0
421V0089 (001)	5.8 525 Ovary Tumor	5.8 525 Ovary Tumor		C14 Bone Marrow	42210619		208	2.1	1210	2.9
421V0089 (001)	15.0 205A Ovary T	15.0 205A Ovary T		270A Liver F	42200606		8676	52.3	1747	2.6
421V0089 (001)	14.5 481A Ovary T (met)	14.5 481A Ovary T (met)		11 Colon N	42210609		3149	17.4	707	2.0
421V0089 (001)	14.4 261A Ovary Tumor	14.4 261A Ovary Tumor		S40 Skeletal muscle	42200621		6312	29.1	1431	2.9
421V0089 (001)	14.2 261A Ovary Tumor	14.2 261A Ovary Tumor		S2 Pancreas F	42200629		7612	38.4	1809	3.3
421V0089 (001)	1.2 402A Ovary T	1.2 402A Ovary T		C119 Brain F	42200610		468	3.4	1308	2.3
421V0089 (001)	12.9 0134 Ovary T (SCH)	12.9 0134 Ovary T (SCH)		P250 F	42200601		2500	12.3	860	2.1
421V0089 (001)	12.5 5015 Ovary T (met)	12.5 5015 Ovary T (met)		C170 Small intestine	42200601		1424	6.7	369	6.1
421V0089 (001)	12.4 263A Ovary Tumor	12.4 263A Ovary Tumor		C15 Heart F	42200614		1742	11.8	724	2.8
421V0089 (001)	12.3 481A Ovary T (met)	12.3 481A Ovary T (met)		272A Endothelial cells	42200608		3083	17.0	1442	2.0
421V0089 (001)	11.9 266A Ovary T	11.9 266A Ovary T		S27 Ovary F	42200604		1170	8.0	742	2.0
421V0089 (001)	1.9 486A Ovary T	1.9 486A Ovary T		S40 PHM Tactival	42200605		1071	2.6	580	2.0
421V0089 (001)	11.7 262A Ovary Tumor	11.7 262A Ovary Tumor		411A Large Intestine	42200622		2097	11.2	1202	2.7
421V0089 (001)	1.1 455A Ovary Tumor	1.1 455A Ovary Tumor		S7 Ovary F	42200626		374	2.9	470	2.0
421V0089 (001)	1.1 268A Ovary Tumor	1.1 268A Ovary Tumor		C172 Lung F	42200625		969	5.6	1094	2.9
421V0089 (001)	1.1 201A Ovary Tumor	1.1 201A Ovary Tumor		S6 Stomach N	42200620		750	5.6	672	2.4
421V0089 (001)	1.1 426A Ovary T (met)	1.1 426A Ovary T (met)		213A Esophagus F	42200612		498	4.2	446	2.1
421V0089 (001)	1.0 9465 1 P Ovary T (C	1.0 9465 1 P Ovary T (C		9485 S P Ovary T (C	42200602		3117	16.7	3174	8.2
421V0089 (001)	5.22 Ovary Tumor	5.22 Ovary Tumor		C19 Kidney N	42200627		224	2.3	409	2.1

FIG. 13

Gene Name	Bal Probe Name	P1	P2 Name	GEN ID	Probe 1		Probe 2	
					Value	S/B	Value	S/B
421100187 (E11)	120.2 426A Ovary T (met)		415A Aorta N	422X00611	5441	36.3	270	2.3
421100187 (E11)	110.0 521 Ovary Tumor		526 Spinal Cord N	422X00628	5018	27.1	531	2.3
421100187 (E11)	116.3 499A Ovary Tumor		464A Ovary F1	422X00614	1252	10.1	130	2.5
421100187 (E11)	15.7 485A Ovary T		591 Fetal tissue	422X00607	9507	1668	1668	2.1
421100187 (E11)	14.4 205A Ovary T		270A Liver F1	422X00606	5456	1245	1245	2.1
421100187 (E11)	14.2 265A Ovary Tumor		CT5 Heart F1	422X00624	1834	418	418	2.0
421100187 (E11)	4.1 482A Ovary T		CT19 Brain F1	422X00610	109	1259	1259	2.0
421100187 (E11)	11.6 264A Ovary Tumor		510 Skeletal muscle	422X00621	1733	1036	1036	2.0
421100187 (E11)	11.1 263A Ovary Tumor		571 Blood F1	422X00624	4163	1299	1299	2.3
421100187 (E11)	15.5 5115 Ovary T (met)		CT10 Small intestine	422X00601	1365	627	627	3.0
421100187 (E11)	12.1 264A Ovary Tumor		S2 Pancreas F1	422X00629	1455	1640	1640	2.1
421100187 (E11)	12.1 464A Ovary T (met)		272A Testis cell	422X00608	2667	1240	1240	3.0
421100187 (E11)	2.1 522 Ovary Tumor		CT9 Kidney F1	422X00627	291	605	605	1.9
421100187 (E11)	1.7 460A Ovary T		S10 FBMC Tactant	422X00605	410	687	687	2.5
421100187 (E11)	11.6 9114 Ovary T (SCH)		L5 Kid F1	422X00601	1622	32	32	2.0
421100187 (E11)	11.5 262A Ovary Tumor		144A Large Intestine	422X00622	1892	984	984	2.2
421100187 (E11)	1.5 268A Ovary Tumor		CT12 Lung F1	422X00625	604	908	908	2.6
421100187 (E11)	1.4 428A Ovary T (met)		211A Esophagus F1	422X00612	246	125	125	2.6
421100187 (E11)	1.3 455A Ovary Tumor		S7 Ovary F1	422X00626	382	501	501	1.9
421100187 (E11)	1.2 201A Ovary Tumor		S6 Stomach N	422X00620	558	677	677	2.0
421100187 (E11)	11.0 9185 1 P Ovary T (met)		9185 S P Ovary T (S)	422X00602	2582	2493	2493	2.3
421100187 (E11)	484A Ovary T (met)		H Colon F1	422X00609	2261	562	562	6.3
421100187 (E11)	266A Ovary T		S27 Ovary F1	422X00603	1739	965	965	1.7
421100187 (E11)	S25 Ovary Tumor		CT4 Bone Marrow	422X00619	283	845	845	2.2

FIG. 14

11721-1

ACGGTTTC.AATGGACACTTTTATTGTTTACTTAATGGATCATCAATTTTGTCTCACTACCTA
CAAATGGAATTTTCATCTTGTTTCCATGCTGAGTAGTGAAACAGTGACAAAGCTAATCATAA
TAACCTACATCAAAAGAGAACTAAGCTA.ACACTGCTCACTTTCTTTTAAACAGGCAAAATA
TAAATATATGCACTCTAXAATGCACAATGGTTT.AGTCACTAAAAAATCAAATGGGATCTT
GAAGAATGTATGCCAAATCCAGGGTGCAGTGAAGATGAGCTGAGATGCTGTGCAACTGTTT
AAGGGTTCTGGCACTGCATCTCTTGGCCACTAGCTGAATCTTGACATGGAAGGTTTTAGC
TAAFGCCAAGTGGAGATGCAGAAAATGCTAAGTTGACTTAGGGGCTGTGCACAGGAATA
AAAGCCAGGAAAGT.ACTAAATATTGCTGAGAGCATCCACCCAGGAAGGACTTTACCTTC
CAGGAGCTCCAAACTGGCACCACCCCAAGTGCTCACATGGCTGACTTTATCCTCCGTGTTT
CATTTGGCACAGCAAGTGGCAGTG

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AAGGCTGGTGGGTTTTTGATCCTGCTGGAGAACCTCCGCTTTCATGTGGAGGAAGAAGGG
AAGGGAAAAGATGCTTCTGGGAACAAGGTTAAAGCCGAGCCAGCCAAAATAGAAGCTTTT
CGAGCTTCACTTTCCAAGCTAGGGGATGTCTATGTCAATGATGCTTTTGGCACTGCTCACA
GAGCCACAGCTCCATGGTAGGAGTCAATCTGCCACAGAAGGCTGGTGGGTTTTTGATGA
AGAAGGAGCTGA.ACTACTT.GCA.AAGGCTTGGAGAGCCAGAGCGACCTTCTGGCCA
TCTGGGCGGAGCTAAAGTTGCACACAAGATCCAGCTCATCAATAATATGCTGGACAAAG
TCAATGAGATGATTATTGGTGGTGGAAATCGCTTTTACCTTCTTAAGGTGCTCAACAACAT
GGAGATTGGCACTTCTCTGTTTGA.TGAAGAGCGAGCCAAGATTGTCAAAGACCTAATGTCC
AAAGCTGACAAGAATGGTGTGAAGATTACCTTGCCTGTTGACTTTGTCACTGCTGACAAGT
TTGATGA

11724-1

TTTGTCTTACATTTTTCTAAAGAGTTACTTAAATCAGTCA.AACTGGTCTTTGAGACTCTTA
AGTCTGATTCCAACCTAGCTAATTCATCTGAGA.ACTGTGGTATAGGTGGCGTGTCTCTTC
TAGCTGGGACAAAAGTTCTTTGTTTCCCTCTGAGAGTATCACAGACCTTCTGCTGAAGC
TGGACCTCTGTCTGGCCCTTGGACTCCCAATCTGCTTGTCAATGTTCAAGCCTGGAAATGTT
AATCTTTAA.TCTTCCATATGGATGGACATCTGTCTAAGTTGATCCTTTAGA.ACACTGCAAT
TATCTTCTTTGAGTCTAATTTCTTCTTTGCTTTGAATCGCATCACTAAACTTCTCTCCC
ATTTCTTAGCTTCA.TATCAACCTGTCAAGTATCTCTGGAGGGAAGACATGCTCTTAGTA
AAGGCTGCAAGCTGGGTCAAGTACTGTCCAAGTTTCTGAAAGTTGCTGA.ACTTCTTGT
CTTTCTTGTTC.AAAGTAACTTGAATCTCTCCAATGTCTCTTCCAAGTGGACTTTTTCTCTGC
GCA.AAGCATCCAG

11724-2

TCATTGCCTGTGATGGCATCTGCAATGTGATGAGCAGCCACGAAGTTGTAGATTTCAATTCA
ATCA.AAGGATTACCATGTGGTGGAAAGCTGTGAGGCAAGAGAAACAAGA.ACTGTATGGCA
AGTTA.AGAAGCACAGAGGCA.AACAAGAGACAGAAAAGCAGTTGCAGGA.AAGCTGAG
CAAGAAATGGAGCA.AATGA.AAGAAATGAG.AAAGTTTGTAAATCT.AA.ACAGCAGAA
AATCTAGAGCTGG.AAGAAGAGAATGACCGGCTTAGGGCAGAGGTGCACCTGCAGGAG
ATACAGCTAAAGAGTGTATGCA.AA.ACACTTCTTTCTCAATGCCACCATGAAGGAAGAAC
TTGA.AAGGGTCA.AAATGGAGTATGA.AACCTTTCTAAGA.AAGTTTCAGTCTTTAATGTCTGA
GAAAG.ACTCTCTA.AGTGAAGAGCTTCAAGATTTAAAGCATCAGATAGA.AAGGTAATGTATC
TAAACAAGCTA.ACCTAGAGGCCACCGAGAAACATGATAACCA.AACGAATGTCACTGAAGA
GGGAACACAGTCTATACCAGT

FIG. 15A

11725-32-1,2

AAGCCAATAATCACCATTATTACTTAATATATGCCAACCCTGTACTTGGCAGTTCACAA
ATTCTCACCGTTACAACAACCCCATGAGGTATTTATTTCCATTCTATAGATAGGGAAACCA
CAGCTCAAGTAAGTTAGGAACTGAGCCAAGTATACACAGAATACGAAGTGGCAAAACTA
GAAGGAAAGACTGACACTGCTATCTGCTGGCCTCCAGTGTCTCTGGCTCTTTTCACACGGGT
CAATGTCTCCAGCGCTGCTGCTGCTGCTGCATTACCATGCCCTCATTGTTTTCTTCTCTG
GTGTTCAACTGCATCCTTCAAAGAATCTAATCTATTCCAGAGACCCTTATTCTTTCTCTC
TTCTGAAATTACTTTTAATAATTCTTCATGAGGGGAAAAGAAGATGCCTGTTGGTAGTT
TTGTTGTTTAAGCTGCTCAATTTGGGACTTAAACAATTTGTTTTCATCTTGTACATCCTGTA
ACAGCTGTGTTTTGCTAGAAAGATCACTCTCCCTCTCTTTTAGCATGGCTTCTAACCTCTTC
AATTCATTTTCTTTTCTTTCAACACAATCTCAAGTCTTCAAAGTGTGATGCAGAAGAGGC
CTCTTTCAAGTTATGTTGTGCTACTTCTGAACATGTGCTTTTAAAGATTCAATTTCTTCTTG
AAGATCCTGTAACCACTTCCCTGTATTGGCTAGGTCTTTCTCTTTCTCTTCCAAAACAGCCT
TCATGGTATTCATCTGTTCTCTTTCTTTTAATAAGTTCAGGAGCTTCAGAAC

11726-1&2

CAAGCTTTTTTTTTTTTTTAAAAAGTGTAGCATTAAATGTTTTATTGTCACGCAGATGGCA
ACTGGGTTTATGTCTTCATATTTTATATTTTGTAAATTAAAAAAATTACAAGTTTTAAATA
GCCAATGGCTGTTTATATTTTCAAGAAACATGATTAGACTAATTCATTAATGGTGGCTTCA
AGCTTTTCTTTATTGGCTCCAGAAAAATCACCCACCTTTTGTCCCTTCTTAAAAAACTGGAA
TGTGGCATGCATTTGACTTCACTCTGAAAGCAACATCCTGACAGTCAATCCACATCTACTT
CAAGGAATATCAGTTGGAAATACTTTTCAAGAGAGGGAATGAAAGAAGGGCTTGATCATTT
TGCAAGGCCCCACACCACGTGCTGAGAACTCAACTACTACAAGTTTATCACCTGCAGCGTC
CAAGGCTTCTTCAAAAGCAGTCTTCTCTGATCTGCTTCAACCATCTTGGCTGCTGGAGTCT
GACGAGCGGCTGTAAAGGACCGATGCAAAATGATCCAAAGCACCAAAACAGAGCTTCAAGA
CTCGCTGCTTGGCTTGAATTCGGATCCGATATCGCCATGGCCT

11727-1&2

AAGTGTAGCATTAAATGTTTTATTGTCACGCAGATGGCAACTGGGTTTATGTCTTCATATT
TATATTTTGTAAATTAAAAAAATTCAGTTTAAATAGCCAATGGCTGTTATATTTT
AGAAAACATGATTAGACTAATTCATTAATGGTGGCTTCAAGCTTTTCTTATTGGCTCCAG
AAAAATCACCCACCTTTTGTCCCTTCTTAAAAAACTGGAATGTTGGCATGCATTTGACTTCA
CACTCTGAAGCAACATCCTGACAGTCAATCCACATCTACTTCAAGGAATATCACGTTGGAAT
ACTTTTCAGAGAGGGAATGAAAGAAAGGCTTGATCATTTTGAAGGCCCCACACCACGTGG
CTGAGAAAGTCAACTACTACAAGTTTATCACCTGCAGCGTCCAAAGGCTTCTGAAAAGCAGT
CTTGGCTCTCGATCTGCTTCAACATCTTGGCTGCTGGAGTCTGACGAGCGGCTGTAAAGGACC
GATGCAATGATCCAAAGCACCAAAACAGAGCTTCAAGACTCGCTGCTTGGCATGAATTC
GGATCCCA

FIG. 15B

11723.1.40.19.19

TACAAACTTTATTGAAACGGCACACGGGCACACACAAACACCCCTGTGGATAGGGAAAA
GCACCTGGCCACAGGGTCCACTGAAACGGGGAGGGGATGGCAGCTTGTAATGTGGCTTTT
GCCACAACCCCTTTCTGACAGGGAAGGCCTTAGATTGAGGCCCCACCTCCCATGGTGATGG
GGAGCTCAGAATGGGGTCCAGGGAGAATTTGGTTAGGGGGAGGTGCTAGGGAGGCATGA
GCAGAGGGCACCCCTCCGAGTGGGGTCCCCAGGGGCTGCAGAGTCTTCAGTACTGTCCCTCAC
AGCAGCTGTCTCAAGGCTGGGTCCCTCAAAGGGGCGTCCCAGCGCGGGGCTCCCTGCGC
AAACACTTGGTACCCCTGGCTGCCAGCGGAAGCCAGCAGGACAGCAGTGGCGCCGATCA
GCACAACAGACGCCCTGGCGGTAGGGACAGCAGGCCAGCCCTGTGGTTGTCTCGGCAG
CAGGTCTGGTTATCATGGCAGAAAGTGTCTTCCCACACTTCACGTCCTTCACACCCACGTG
AXGGCTACXGGCCAGGAAG

11723.2.40.19.19

CCCGTGGGTGCCATCCACGGAGTTGTTACCTGATCTTTGGAAGCAGGATCGCCCGTCTGCA
CTGCAGTGGAAGCCCCGTGGGCAGCAGTGATGGCCATCCCCGATGCCACGGCCTCTGGG
AAGGGGCAGCAACTGGAAGTCCCTGAGACGGTAAAGATGCAGGAGTGGCCGGCAGAGCA
GTGGGCATCAACCTGGCAGGGGCCACCCAGATGCCTGCTCAGTGTGTGGGCCATTTGTCC
AGAAGGGGACGGCAGCAGCTGTAGCTGGCTCCTCCGGGGTCCAGGCAGCAGGCCACAGGG
CAGAACTGACCATCTGGGCACCGCGTTCAGCCACCAGCCCTGCTGTTAAGGCCACCCAGC
TCACCAGGGTCCACATGGTCTGCTGCTCCGACTCCCGGGTCCCTTGGGGCCTGATGGTTC
TACCTGCTGTGAGCTGCCAGTGGGAAGTATGGCTGCTGCCAATGCCCAACGCCACCTGCT
GCTCCGATCACCTGCACCTGCTGCCCAAGACACTGTGTGTGACCTGATCCAGAGTAAGTGC
CTCTCCAAGGAGAACG

11730-1

GAATCACCTTTCTGGTTTACCTAGTACTTTGTACAGAACAATGAGGTTTCCCACAGCGGAG
TCTCCCTGGGCTCTGTTTGGCTCTCGGTAAAGGCAGGCCTACACCTTTTCTCTCTCTATGG
AGAGGGGAATATGCAATTAAGGTGAAGAGTCACTTCCAAAAGTGAGAAAGGGATTGATT
GCTGCTTCAGGACTGTGGAAATTTTGAATGTTTACAAATGGTTGCTACAAAACAACAA
AAAAGGTAATTACAAAATGTGTACATCACAACATGCTTTTAAAGACATTATGCAATTGTGC
TCACATTCCTTAAATGTTGTTTCCAAAAGGTGCTCAGCCTCTAGCCCAGCTGGATTCTCCGG
GAAGAGGCAGAGACAGTTTGGCGAAAAGACACAGGGAAGGAGGGGGTGGTGAAGGA
GAAAGCAGCCTTCCAGTTAAAGATCAGCCCTCAGTTAAAGGTCAGCTTCCCGCAXGCTGGC
CTCAXGCGGAGTCTGGGTCCAGAGGGAGCAGCAGCAGGCTGGGACTGGGGCGT

11730-2

AACCGGAGCGCGAGCAGTACCTGGGTGGCCACCATGGCTGGGATCACCACCATCGAGGCG
GTGAAGCGCAAGATCCAGGTTCTGCAGCAGCAGCCAGATGATGCAGAGGAGCGAGCTGA
GCGCCTCCAGCGAGAAGTTGAGGGAGAAAGCCGGGGCCCGGGAACAGGCTGAGGCTGAGG
TGGCCTCCTTGAACCGTAGGATCCAGCTGGTTGAAGAAGAGCTCGACCGTGCTCAGGAGC
GCCTGGCCACTGCCCTGCAAAAAGCTGGAAGAAGCTGAAAAAGCTGCTGATGAGAGTGAGA
GAGGTATGAAGGTTATTGAAAACCGGGCCTTAAAGATGAAGAAGATGGAAGTCCAG
GAAATCCAAGTCAAGAGAGCTAAGCACAATCCAGAAGAGGCAGATAGGAAGTATGAAGA
GGTGGCTCGTAAGTTGGTGATCAATGAAGGAGACTTGGAAACCCACAGAGGAACGAGCTGA
GCTGGCAGAGTCCCGTTGCCGAGAGATGGATGAGCAGATTAGACTGATGCACCAGAACCT
GAAGTGTCTGAGTGC

FIG. 15C

11732.1contig

GAGAACTTGGCCTTTATTGTGGGCCCAGGAGGGCACAAGGTCAGGAGGCCCAAGGGAGG
 GATCTGGTTTTCTGGATAGCCAGGTATAGCATGGGTATCAGTAGGAATCCGCTGTAGCTG
 CACAGGCCTCACTTGGCTGCAGTTCGGGGGAGAAACCTGCACTGCATGGCGTTGATGACCT
 CGTGGTACACGACAGAGCCATTGGTGCAGTGCAAGGGCACGCGCATGGGCTCCGTCCTCG
 AGGGCAGGCAGCAGGAGCATTCTCCTGCACATCCTCGATGTCAATGGAGTACACAGCTT
 TGCTGGCACACTTTCCCTGGCAGTAATGAATGTCCACTTCCTCTTGGGACTTACAATCTCCC
 ACTTTGATGTACTGCACCTTGGCTGTGATGTCTTTGCAATCAGGCTCCTCACATGTGTCACA
 GCAGGTGCCTGGAATTTTACGATTTTGCCTCCTTCAGCCAGACACTTGTGTTTCATCAAATG
 GTGGGCAGCCCGTGACCCTCTTCTCCAGATGTACTCTCCTCT

11732.2contig

GCCTGGACCTTGCCGGATCAGTGCCACACAGTGACTTGCTTGGCAAATGGCCAGACCTTGC
 TGCAGAGTCATCGTGTCAATTGTGACCATGGACCCCGGCCCTTCATGTGCCAACAGCCAGTC
 TCCTGTTCCGGGTGGAGGAGACGTGTGCTGGCGCTGGACCTGCCCTTGTGTGTGCACGGGG
 AGTTCCACTCGGCACATCGTCACTTTCGATGGGCAGAATTTCAAGCTTACTGGTAGCTGCT
 CCTATGTCACTTTTCAAAACAAGGAGCAGGACCTGGAAGTGCTCCTCCACAATGGGGGCTG
 CAGCCCCGGGGCAAAACAAGCCTGCATGAAGTCCATTGAGATTAAAGCATGCTGGCGTCTC
 TGCTGAGCTGCACAGTAACATGCGAGATGGCAGTGGATGGGAGACTGGTCCTTGGCCCCGTA
 CGTTGGTGAACAACATGGAAGTCAGCACTTACGGCGCTATCATGTATGAAGTCAGGTTTACC
 CATCTTGGCCACATCCTCACATACACCGGCCCAAAACAACGACTT

11735-1-2

AGATCAACCTCTGCTGGTCAGGAGGAATGCCCTTCTTGTCTTGGATCTTTGCTTTGACGTT
 TCGATAGTRWCACTKXRYTSRAMSKMAAGNGYRATGRWMTTKSYWGWASXTMIWWM
 RSGRARAYTTGCAAYCCCMCTCWAGCGSAGKACCARGTGCAAGGTGGACTCTTTCTG
 GATGTTGTAGTCAGACAGGGTGGCTTCATCTTCCAGCTGTTTCCCAGCAAAGATCAACCTC
 TGCTGATCAGGAGGGATGCCCTTCTTATCTTGGATCTTTGCCCTTGACATTCTCGATGGTGT
 ACTGGGCTCCACCTCGAGGGTGATGGTCTTACCAGTCAGGCTCTTCACGAAGATYTGATC
 CCACCTCTGAGACGGAGCACCAGCTCCAGGGTTCAGTCTTCTGGATGTTGTAGTCAGACA
 GGGTGGCYCCATCTTCCAGCTGGTTCCSAGCAAAGATCAACCTCTGCTGGTTCAGGAGGRAT
 GCCTTCTTGTCTYTCGATCTTTGCTTACRTTCTCRATGGTGTCACTCGGCTCCACTTCGA
 GAGTCATGGTCTTACCAGTCAGGGTCTTCACGAAGATCTGCATCCACCTCTAA

11740.2.contig

AAGTCACAAACAGACAAAGATTATTACCAGCTGCAAGCTATATTAGAAGCTGAACGAAGA
 GACAGAGGTATGATTTCTGAGATGATGGAGACCTTCAAGCTCGAATTACATCTTTACAAG
 AGGAGGTGAAGCATCTCAAAACATAATCTCGAAAAAGTGGAAAGGAGAAAGAAAAGAGGCT
 CAAGACATGCTTAATCACTCAGAAAAAGGAAAAAGATAATTTAGAGATAGATTTAAACTAC
 AAACCTTAAATCATTACAACAACGGTTAGAACAAGAGCTAAATGAACACAAGTAACCAAA
 GCTCGTTTAACTGACAAACATCAATCTATTGAAGAGGCAAAAGTCTGTGGCAATGTGTGAG
 ATGGAAAAAAGCTGAAAGAAAGAAAGAGAGCTCGAGAGAAGGCTGAAAAATCGGGTTGT
 TCAGATTGAGAAACAGTGTTCATGCTAGACGTTGATCTGAAGCAATCTCAGCAGAAACT
 AGAACATTTGACTGCAAAATAAAGAAAGGATGGACGATGAAGTTAAGAATCTA

FIG. 15D

11765.2&64.2.contig

CGCCTCCACCATGTCCATCAGGGTGACCCAGAAAGTCCTACAAGGTGTCCACCTCTGGCCCC
CGGGCCTTCAGCAGCCGCTCCTACACGAGTGGGCCCCGGTTCCCGCATCAGCTCCTCGAGCT
TCTCCCGAGTGGGCAGCAGCAACTTTTCGGGTGGCCTGGGCGGCGGCTATGGTGGGGCCA
GCGGCATGGGAGGCATCACCGCAGTTACGGTCAACCAGAGCCTGCTGAGCCCCCTTGTCTCT
GGAGGTGGACCCCAACATCCAGGCCGTGGCACCAGGAGAAGGAGCAGATCAAGACCCT
CAACAACAAAGTTTGCCTCCTTCATAGACAAGGTACGGTTCCTGGAGCAGCAGAACAAAGAT
GCTGGAGACCAAGTGGAGCCTCCTGCAGCAGCAGAAGACGGCTCGAAGCAACATGGACA
ACATGTTTCGAGAGCTACATCAACARCCTTAGGCGGCAGCTGGAGACTCTGGGCCAGGAGA
AGCTGAAGCTGGAGGCGGAGCTTGGCAACATGCAGGGGCTGGTGGAGGACTTCAAGAAC
AAGTATGAGGATGAGATCAATAAGCGTACAGAGATGGAGAACGAATTTGTCTCATCAAG
AAGGATGTGGATGAAGCTTACATGAACAAGGTAGAGCTGGAGTCTCGCCTGGAAGGGCTG
ACCGACGAGATCAACTTCTCAGGCAGCTGTATGAAGAGGAGATCCGGGAGCTGCAGTCC
CAGATCTCGGACACATCTGTGGTCTGTCCATGGACAACAGCCGCTCCCTGGACATGGACA
GCATCATTGCTGAGGTCAAGGCACAGTACGAGGATATTGCCAACCCGAGCCGGGCTGAGG
CTGAGAGCATGTACCAGGTCAAGTATGAGGAGCTGCAGAGCCTGGCTGGGAAGCACGGGG
ATGACCTGCGGCGCACAAAGACTGAGATCTCTGAGATGAACCCGGAACATCAGCCCGGCT
XCAGGCTGAGATTGAGGGCCTCAAAGGCCAGAXGGCTTXCCTGGAXGXCCGCCAT

11767.2.contig

CCCCGAGCCAGCCAAACGAGCGGAAAATGGCAGACAAATTTTTCGCTCCATGATGCGTTATCT
GGGTCTGGA.A.A.C.C.C.A.A.A.C.C.C.T.A.A.G.G.A.T.G.C.C.T.G.G.C.C.A.T.G.G.G.G.A.A.C.C.A.G.C.C.T.G.C.T.G.G.
G.C.A.G.G.G.G.G.C.T.A.C.C.C.A.G.G.G.C.T.T.C.T.A.T.C.T.G.G.G.C.C.T.A.C.C.C.G.G.C.A.G.G.C.A.C.C.C.C.A.G.G.G.
G.C.T.T.A.T.C.T.G.G.A.C.A.G.G.C.A.C.T.C.C.A.G.G.C.C.C.T.A.C.C.C.T.G.G.A.G.C.A.C.C.T.G.G.A.C.T.T.A.T.C.C.G.G.A.G.
C.A.C.C.T.G.C.A.C.C.T.G.G.A.G.T.C.T.A.C.C.C.A.G.G.C.C.C.A.C.C.C.A.G.G.C.C.C.T.G.G.G.C.C.T.A.C.C.C.A.T.C.T.T.C.T.G.G.
A.C.A.G.C.C.A.A.G.T.C.C.C.A.C.C.G.G.A.C.C.C.T.A.C.C.C.T.G.C.A.C.T.G.G.C.C.C.T.A.T.G.G.C.G.C.C.C.T.G.C.T.G.G.G.C.C.A.
C.T.G.A.T.T.G.T.G.C.C.T.T.A.A.C.C.T.G.C.C.T.T.G.C.C.T.G.G.G.G.A.G.T.G.G.T.G.C.C.T.C.C.A.T.G.C.T.G.A.T.A.A.C.A.A.
T.T.C.T.G.G.C.C.A.C.G.G.T.G.A.A.G.C.C.C.A.A.T.G.C.A.A.C.A.G.A.A.T.T.G.C.T.T.A.G.A.T.T.C.C.A.A.A.G.A.G.G.G.A.A.T.G.
A.T.G.T.T.G.C.C.T.T.C.C.A.C.C.C.A.C.C.C.T.T.C.A.A.T.G.A.A.C.A.A.C.A.G.G.A.G.T.C.A.T.T.G.G.T.T.G.C.A.A.
T.A.C.A.A.A.G.C.T.G.G.A.T.A.A.

11768-1&2

GGGAATGCC.AACA.A.C.T.T.T.A.T.T.G.A.A.G.G.A.A.A.G.T.G.C.A.A.T.G.A.A.A.T.T.T.G.T.T.G.A.A.A.C.C.T.T.A.A.A.A.G.G.
G.G.A.A.A.C.T.T.A.G.A.C.A.C.C.C.C.C.C.C.T.C.R.A.G.C.M.A.G.K.A.C.C.A.R.G.T.G.C.A.R.A.G.T.G.G.A.C.T.C.T.T.T.C.T.G.G.A.T
G.T.T.G.T.A.G.T.C.A.G.A.C.A.G.G.G.T.R.C.G.W.C.C.A.T.C.T.T.C.C.A.G.C.T.G.T.T.T.Y.C.C.R.G.C.A.A.A.G.A.T.C.A.A.C.C.T.C.T.G.C.
T.G.A.T.C.A.G.G.A.C.G.R.A.T.G.C.C.T.T.C.T.T.A.T.C.T.T.G.C.A.T.C.T.T.T.G.C.C.T.T.G.A.C.A.T.T.C.T.G.A.T.G.G.T.G.T.C.A.C.T
G.G.G.C.T.C.C.A.C.C.T.C.G.A.C.G.G.T.G.A.T.G.G.T.C.T.T.A.C.C.A.G.T.C.A.G.G.G.T.C.T.T.C.A.C.G.A.A.G.A.T.Y.T.G.C.A.T.C.C.C.A.
C.C.T.C.T.G.A.C.A.C.C.G.A.C.C.A.C.C.A.G.G.T.C.C.A.G.G.G.T.R.C.A.C.T.C.T.T.T.C.T.G.A.T.G.T.T.G.T.A.G.T.C.A.G.A.C.A.G.G.
G.T.G.C.G.Y.C.C.A.T.C.T.T.C.C.A.C.C.T.G.C.T.T.T.C.C.S.C.C.A.A.A.G.A.T.C.A.A.C.C.T.C.T.G.C.T.G.C.T.C.A.G.G.A.G.G.R.A.T.G.C.
C.T.T.C.C.T.T.G.T.C.Y.T.G.G.A.T.C.T.T.T.C.C.Y.T.T.C.A.C.R.T.T.C.T.C.A.A.T.G.G.T.G.T.C.A.C.T.C.G.C.T.C.C.A.C.T.T.C.G.A.G.A.
G.T.G.A.T.G.G.T.C.T.T.A.C.C.A.G.T.C.A.C.C.G.T.C.T.T.C.A.C.G.A.A.G.A.T.C.T.G.C.A.T.C.C.C.A.C.C.T.C.T.A.A.G.A.C.G.G.A.G.C.A.
C.C.A.G.G.T.G.C.A.G.G.G.T.G.G.A.C.T.C.T.T.T.C.T.G.G.A.T.G.T.T.G.T.A.G.T.C.A.G.A.C.A.G.G.G.T.C.C.T.C.A.T.C.T.T.C.C.A.
G.C.T.G.T.T.T.C.C.C.A.G.C.A.A.A.G.A.T.C.A.A.C.C.T

FIG. 15E

11768-1&2-11735-1&2

AGGTTGATCTTTGCTGGGAAACAGCTGGAAGATGGACGCACCCTGTCTGACTACAAcCATC
 CAGAAAGAGTCCACCCTGCACCTGGTGTCTCCGTCTTAGAGGTGGGATGCAGATCTTTCGTGA
 AGACCCTGACTGGTAAGACCATCACTCTCGAAGTGGAGCCGAGTGACACCATTGAGAAYG
 TCAARGCAAAGATCCARGACAAGGAAGGCATYCCTCCTGACCAGCAGAGGTTGATCTTTG
 CcSGGAAAgCAGCTGGAAGATGGRCCGACCCTGTCTGACTACAACATCCAGAAAGAGTCYA
 CCCTGCACCTGGTGTCTCCGTCTCAGAGGTGGGATGCAATCTTCGTGAAGACCCTGACTGG
 TAAGACCATCACCTCGAGGTGGAGCCAGTGACACCATCGAGAATGTCAAGGCAAAGAT
 CCAAGATAAGGAAGGCATCCCTCCTGATCAGCAGAGGTTGATCTTTGCTGGGAAACAGCT
 GGAAGATGGACGCACCCTGTCTGACTACAACATCCAGAAAGAGTCCACcTYTGACACYTGGT
 MCTBCGcCTYgAGAGGKGGGRTGc3aaTCTWMGTKWagaCaCtCaCTKKYAAGRYYaTCAMCMWt
 gAKKTCgAKYSCASTKWC3CTWTCRAKAAMGTYRWWGCAWagaTCCMAGACAAGGAAGGC
 ATTCCTCCTGACCAGCAGAGGTTGATCT

11769.1.contig

ATGGAGTCTCACTCTGTCTGACCAGGCTGGAGCGCTGTGGTGGGATATCGGCTCACTGCAGT
 CTCCACTTCCTGGGTTCAAGCGATCCTCTGCCTCAGCCTCCCGAGTAGCTGGGACTACAG
 GCAGGCGTCAACCATAAATTTTGTATTTTGTAGTAGAGACATGGTTTCGCCATGTTGGCTGGG
 CTGGTCTCGAACTCCTGACCTCAAGTCACTGTCTGGCCTCCCAAAGTGTGGGATTACA
 GGCGAAAGCCAAAGCTCCCGGCCAGGCAACAACCTTTAGAATGAAGGAAATATGCAAAAG
 AACATCACATCAAGGATCAATTAATTACCATCTATTAATTACTATATGTGGGTAATTATGA
 CTATTTCCCAAGCAATCTACGTTGACTGCTTGAGAAGATGTTTGTCTGCATGGTGGAGAG
 TGGAGAAGGGCCAGGATCTTAGCTT

11769.2.contig

AGCGCGGTCTTCCGGCCGGAGAAAGCTGAAGGTGATGTGGCCGCCCTCAACCGACGCATC
 CAGCTCGTTGAGGACGAGTTGCACAGGGCTCAGGAACGACTGGCCACGGCCCTGCAGAAAG
 CTGGAGGAGGCAGAAAAGCTGCAGATGAGAGTGAGAGAGGAATGAAGGTGATAGAAAAG
 CCGGGCCATGAAGGATGAGGAGAAAGATGGAGATTCAGGAGATGCAGCTCAAAGAGGCCA
 AGCACATTCGGGAAGAGGCTGACCGCAATAACGAGGAGGTAGCTCGTAACCTGGTCAATCC
 TGGAGGGTGAGCTGGAGAGGGCAGAGGAGCGTCCGGAGGTGTCTGAACTAAAATGTGGT
 GACCTGGAAGAAGAACTCAAGAAATGTTACTAACAATCTGAAATCTCTGGAGGCTGCATCT
 GAAAAGTATTCTGAAAAGGAGGACAAAATATGAAGAAGAAATTAACCTTCTGTCTGACAAA
 CTGAAAGAGGCTGAGACCCGTGCTGAATTTGCAGAGAGAACGGTTGCAAAACTGGAAAAG
 ACAATTGATGACCTGGAAGAGAAACTTCCCCAGC

11770.1.contig

GTGCACAGGTCCCATTTATTTAGAAAATAATAATTACAGTGATGAATAGCTCTTCTT
 AAAATTACAAAACAGAAACCACAAAGGAAGGAAGGAAAACCCCAAGGACTTCCAAGGGT
 GAAGCTGTCCCTCCTCCCTGCCACCTCCCAAGGCTCATTAGTGCTTGGAAAGGGGCAGA
 GGAATCAGAGGGGATCACTCTCCAGGGCCCTGGGCTGAAGCGGGTGAGGCAGAGAGTCC
 TGAGGGCCACAGAGCTGGGCAACCTGACCGGCTCTCTGGCCCCCTCCCCACCCTGCCCCA
 AACCTGTTTACAGCACCTTGGGGCTCCCTCTAAACCGTCCATCCACTCTGCACTTCCCA
 GGCAGGTGGGTGGGCCAGGCTCAGCCATACTCCTGGGCGGGGTTTCGGTGACCAAGGC
 AACTCTCCAGAGGTGATATCAAGGCT

FIG. 15F

11770.2.contig

GCAAGGAACTGGTCTGCTCACACTTGGCTGGCTTGCATCAGGACTGGCTTTATCTCCTGA
CTCACGGTGC.AAAGGTGCACTCTGCGAACGTTAAGTCCGTCCCCAGCGCTTGGAAATCCTAC
GGCCCCACAGCCGGATCCCCCTCAGGCTTCCAGGTCTCAACTCCCGTGGACGCTGAACAA
TGGCCTCCATGGGGCTACAGGTAATGGGCATCGCGCTGGCCGTCTGGGCTGGCTGGCCGT
CATGCTGTGCTGCGCGCTGCCCCATGTGGCGCGTGACGGCCTTCATCGGCAGCAACATTGTC
ACCTCGCAGACCATCTGGGACGGCCTATGGATGAACTGCGTGGTGCAGAGCACCGGCCAG
ATGCAGTGCAAGGTGTACGACTCGCTGCTGGCACTGCCGACGGACCTGCAGGCGGCCCCG
GCCCTCGTCATCATCA

11773.1.contig

TGCAAAAGGGACACAGGGGTTCA.AAAAT.AAAAAATTTCTCTTCCCCCTCCCCAAACCTGTAC
CCCAGCTCCCCGACCAC.AACCCCTTCTCTCCCCGGGAAAGCAAGAAGGAGCAGGTGTG
GCATCTGCAGCTGGGAAGAGAGAGGCGGGGAGGTGCCGAGCTCGGTGCTGGTCTCTTTC
CAAATATAAATACXTGTGTACAGAACTGGA.AAATCCTCCAGCACCCACCACCAAGCACTCT
CCGTTTTCTGCCGGTGT.TTGGAGAGGGGGGGGGGAGGGGGCGCCAGGCCACCGGTGGCT
GCGGTCTACTGCATCCGCTGGGTGTGCAACCCCGCGAGCCTCCTGCTGCTCATTGTAGAAGA
GATGACACTCGGGGTCCCCCGGATGGTGGGGGCTCCCTGGATCAGCTTCCCGGTGTTGGG
GTTACACACACCAGCACTCCCCACGCTGCCCGTTACAGAGACATCTTGCACCTGTTGAGGTTG
TACAGGCCATGCTTGTACAGTTG

11773.1.contig

GGGTTGGAGGGACTGGTTCTTTATTTCA.AAAAGACACTTGTCAATATTCAGTATCA.AAACA
GTTGCACTATTGATTTCTCTTCTCCCAATCGGCCCAAGAGACCACATA.AAAAGGAGAGT
ACATTTTAAGCCAATAAGCTGCAGGATGTACACCTAACAGACCTCCTAGAAACCTTACCAG
AAAATGGGGACTGGGTAGGGAAAGCAAACTTAA.AAGATCA.ACAAACTGCCAGCCACCGA
CTGCAGAGGCTGTACACAGCCAGATGGGGTGGCCAGCGTGCCACA.AAGCCAAAGCAAGTT
TCA.AAATAATA.AAAATTT.A.AAAAGTTTGTACATAAGCTATTCAAGATTTCTCCAGCACT
GACTGATACAAAGCACAAATTGAGATGCCACTTCTAGAGACAGCAGCTTCAAACCCAGAAA
AGGCTGATGAGATGAGTTTACATGCGCTAAATCAGTGGCAAAAACACAGTCTTCTTTCTT
CTTTCTTTCAAGGAGGCAAGGAAACCAATTAAGTGGTCACCTCAACATAAGGGGGACATGA
TCCATTCTGT.AAGCAGTTCTGA.AAGCC

11773-2&30-2

CAGGAACCGGAGCCGAGCAGTAGCTGGGTGGGCACCATGGCTGGGATCACCACCATCGA
GCCGGTGAAGCGCAAGATCCAGCTTCTGCAGCAGCAGGCAGATGATGCAGAGGAGCCAG
CTGAGCGCCTCCAGCGAGAACTTACGGGAGAAAGCCGGGGCCCGGAACAGGCTGAGGCT
GAGGTGGCCTCCTTGA.ACCGTAGGATCCAGCTGGTTGA.AGAAGAGCTGGACCGTGCTCAG
GAGCGCCTGGCCACTGCCCTGCCAAAGCTGGAAAGAACTGAA.AAAGCTGCTGATGAGAGT
GAGAGAGGTATGAAGGTTA.TTGA.AAACC GGCCCTTAA.AAGATGA.AGA.AAAGATGGA.ACT
CCAGGAAATCCA.ACTCAA.AGAAGCTAAGCACATTGCAGAAAGAGGCAGATAGGAAGTATG
AAGAGGTGGCTCGTAAGTTGGTGATCA.TTGA.AAGGAGACTTGC.AACGCACAGAGGAACGAG
CTGAGCTGGCAGAGTCCCGTTGCCGAGAGATGGATGAGCAGATTAGACTGATGGACCAGA
ACCTGA.AGTGTCTGAGTGC

FIG. 15G

11782.1.contig

ATCTACGTCATCAATCAGGCTGGAGACACCATGTTCAATCGAGCTAAGCTGCTCAATATTG
GCTTTCAAGAGGCCTTGAAGGACTATGATTACAACCTGCTTTGTGTTCACTGATGTGGACCT
CATTCCGATGGACGACCGTAAATGCCTACAGGTGTTTTTCGCAGCCACGGCACATTTCTGTT
GCAATGGACAAGTTCGGGTTTAGCCTGCCATATGTTCACTATTTTGGAGGTGTCTCTGCTCT
CAGTAAACAACAGTTTCTTGCCATCAATGGATTCCCTAATAATTATTGGGGTTGGGGAGGA
GAAGATGACGACATTTTAAACAGATTAGTTCATAAAGGCATGTCTATATCACGTCCAAATG
CTGTAGTAGGGAGGTGTGCAATGATCCGGCATTCAAGAGACAAGAAAAATGAGCCCAATC
CTCAGAGGTTTGACCGGATCGCACATACAAAGGAAACGATGCGCTTCGATGGTTTGAAC
CACTTACCTACAAGGTGTTGGATGTGAGAGATACCCGTTATATACCCAAATCAC

11782.2.contig

CTAGACCTCTAATTAAAAGGCCACAATCATGCTGGAGAATGAACAGTCTGACCCCGAGGGC
CACAGCGAATTTTAGGGAAGGAGGCCAAAGAGGTGAGAAGGGAAAGGAAGGAAGG
AAGGAGAACAAATAAGAACTGGAGACGTTGGGTGGGTCAGGGAGTGTGGTGGAGGCTCGG
AGAGATGGTAAACAAACCTGACTGCTATGAGTTTTCAACCCCATAGTCTAGGGCCATGAG
GGCGTCAGTTCTTGGTGGCTGAGGGTCTTCCACCCAGCCCACCTGGGGGAGTGGAGTGG
GGAGTTCTGCCAGGTAAAGCAGATGTTGTCTCCCAAGTTCTGACCCAGATGTCTGGCAGGA
TAACGCTGACCTGTTCCCTCAACAAGGGACCTGAAAGTAAATTTGCTCTTTAC

11783-1 & 2

CCGAATTCAAGCGTCAACGATCCYTCCTTACCATCAAAATCAATTGCCACCAATGGTACT
GAACCTACGAGTACACCGACTAGGGCGGACTAATCTTCAACTCCTACATACTTCCCCCAT
TATTCCTAGAACCAGGCGACCTGGGACTCCTTGACGTTGACAATCGAGTAGTACTCCCGAT
TGAAGCCCCCATTCGTATAATAATTACATCAAAAGACGTCTTGCACTCATGAGCTGTCCCC
ACATTAGGCTTAAAAACAGATGCAATTCGCGGACGTCTAAGCCAAACCACTTTCACCGCTA
CACGACCGGGGGTATACTACGGTCAATGCTCTGAAATCTGTGGAGCAAAACCACAGTTTCAT
GCCCATCGTCTCAGAAATTAATTCGCTTAAAAATCTTTGAAATAGGGCCCCGTATTTACCCTA
TAGCACCCCTCTACCCCTCTAG

11786.1.contig

GCTCTTCACACTTTTATTGTTAAATCTCTTCACATGGCAGATACAGAGCTGTGCTCTTGAAG
ACCACCACTGACCAAGGAAATGCCACTTTTACAAAATCATCCCCCTTTTCATGATTGGAAC
AGTTTCTGACCGTCTGGGAGCGTTGAAGCGTGACCAAGCACATTTGCACATGCAAAAAA
GGAGTCACCCCAAGGCTCAACCACTTCCAGAGCTCACCATGGGCTGCAGGTGACTT
GCCAGGTTTGGGGTTGCTGAGCTTTCCTTCTGCTGCGGTGGGAGGCCCCCTCAAGAACTGA
GAGGCGGGGGTATGCTTCATGAGTGTAAACATTTACGGGACAAAAGCGCATCATTAGGAT
AAGCAACAGCCACAGCACTTCATGCTTCTGAGGGTTAGCTGTAGGAGCGGGTGAAAGGAT
TCCAGTTTATGAAAAATTAAGCAAAACAACGGTTTTTAGCTGGGTGGGAAACAGGAAAAAC
TGTGATGTGGCCCAATGACCACTTTTCTGCCCATGTGAAGGTCCCCATGAAACC

FIG. 15H

11786.2.contig

CAAGCGCTTGGCGTTTGGACCCAGTTTCAGTGAGGTTCTTGGGTTTTGTGCCTTTGGGGATT
TGGTTTGACCCAGGGGTCAGCCTTAGGAAGGTCTTCAGGAGGAGGCCGAGTTCCCCTTCAG
TACCACCCCTCTCTCCCCACTTTCCCTCTCCCGGCAACATCTCTGGGAATCAACAGCATATT
GACACGTTGGAGCCGAGCCTGAACATGCCCCCTCGGCCCCAGCACATGGAAAACCCCCCTTC
CTTGCCCTAAGGTGTCTGAGTTTCTGGCTCTTGAGGCAATTCAGACTTGAAATTCTCATCAG
TCCATTGCTCTTGAGTCTTTGCAGAGAACCCTCAGATCAGGTGCACCTGGGAGAAAGACTTT
GTCCCCACTTACAGATCTATCTCCTCCCTTGGGAAGGGCAGGGAATGGGGACGGTGTATGG
AGGGGAAGGGATCTCCTGCGCCCTTCATTGCCACACTTGGTGGGACCATGAACATCTTTAG
TGTCTGAGCTTCTCAAATTACTGCAATAGGA

13691.1&2

AGCGTCAAATCAGAATGGAAAAGACTCAAATCCATCATCAACACCAAGATCAAAAAGGAC
AAGRATCCTTCAAGAAACAGCAAAAACCTCCTAAAACACCAAAAGGACCTAGTTCTGTAG
AAGACATTAAAGCAAAAATGCAAGCAAGTATAGAAAAAGGTGGTTCTCTTCCCAAAGTGG
AAGCCAAATTCATCAATTATGTGAAGAAATGCTTCCGGATGACTGACCAAGAGGCTATTCA
AGATCTCTGGCAGTGGAGGAAGTCTCTTAAAGAAAATAGTTTAAACAATTTGTTAAAAAAT
TTCCGTCTTATTTCAATTTCTGTAACAGTTGATCTGGCTGTCTTTTTATAATGCAGAGT
GAGAATTTCCCTACCGTGTTTGATAAATGTTGTCCAGGTTCTATTGCCAAGAATGTGTTGT
CCAAAATGCCTGTTTAGTTTTAAAGATGCAACTCCACCCCTTGGCTTGGTTTTAAGTATGTA
TGGAAATGTTATGATAGGACATAGTAGTACCGGTGGTCAGACATGGAAAATGGTGGGSMGAC
AAAAATATACATGTGAAATAA

13692.1&2

TCCGAATTCCAAGCGAATTATGGACAAACGATTCCTTTAGAGGATTACTTTTTCAATTTT
GGTTTTAGTAATCTAGGCTTTGCTGTAAAGCAATACAACGATGGATTTTAAATACTGTTTT
TGGAATGTGTTTTAAAGCAATTGATTTCTAGAACCCTTGTATATTGATAGTATTTCTAATTTT
ATTTCTTTACTGTTTGCAGTTAATGTTTCATGTTCTGCTATGCAATCGTTTATATGCACGTTT
TTTTAATTTTTAGATTTTCTCGATGTATAGTTTAAACAACAAAAAGTCTATTTAAACTG
TAGCAGTAGTTTACAGTTCTAGCAAAAGACGAAAGTTGTGGGGTTAAACTTTGTATTTTCTT
TCTTATAGAGGCTTCTAAAAGGTATTTTATATGTTCTTTTAAACAAATATTGTGTACAAC
CTTTAAACATCAATGTTTGGATCAAAACAGACCCAGCTTATTTTCTGC

13693.2

TGTGGTGGCGCCGGCTGAGGTGGAGGCCAGGACTCTGACCCCTGCCCTTCAGCAA
GGCCCCCGGCAGCGCCGCCACTACGAACCTGCCGTGGGTTGAAAAATATAGGCCAGTAAA
GCTGAATGAAATTTGTGGGAATGAAGACACCGTGAGCAGGCTAGAGGTCTTTGCAAGGGA
AGGAAATGTGCCCCAACATCATCATTTGGCGGCCCTCCAGGAACCGGCAAGACCACAAGCAT
TCTGTGCTTGGCCCGGGCCCTGCTGGGCCAGCACTCAAAGATGCCATGTTTGGAACTCAAT
GTTTCAAATGACAGGGGCCATTGACGTTGTGAGGAATAAAATTAATGTTTGTCTAACAA
AAAGTCACTCTTCCCAAAGCGCCGACATAAGATCATCAATTCGATGAAGCAGACAGCATG
ACCGACGGAGCCCAAGCCTTGAGGAGAACCATGCAAAATCTACTCTAAAACCACTCGT
TCGCCCTTGTGTAATGCTTCGGATAAGATCATCGAGCC

FIG. 15I

13696.1-13744.1

CTTTGCAAAGCTTTTATTTTCATGTCTGCGGCATGGAATCCACCTGCACATGGCATCTTAGCT
GTGAAGGAGAAAAGCAGTGCACGAGAAGGAATGAGTGGGCGGAACCAACGGCCTCCACAA
GCTGCCCTTCAGCAGCCTGCCAAGGCCATGGCAGAGAGAGACTGCAAACAAACACAAGCA
AACAGAGTCTCTTCACAGCTGGAGTCTGAAAGCTCATAGTGGCATGTGTGAATCTGACAA
AATTAAAAGTGTGCATAGTCCATTACATGCATAAAACACTAATAATAATCCTGTTTACACG
TGACTGCAGCAGGCAGGTCCAGCTCCACCACTGCCCTCCTGCCACATCACATCAAGTGCCA
TGGTTTAGAGGGTTTTTCATATGTAATTTCTTTTATTCTGTAAAAGGTAACAAAATATACAG
AACAAAACCTTTCCCTTTTTAAAATAATGTTACAAATCTGTATTATCACTTGGATATAAAT
AGTATATAAGCTGATC

13700.1

CAAGGGATATATGTTGAGGGTACRGRGTGA⁻ACTGAACAGATCACAAAGCAGGAGAAACA
TTAGTTCTCTCCCTCCCCAGCGTCTCCTTCGTCTCCCTGGTTTTCCGATGTCCACAGAGTGA
GATTGTCCCTAAGTAACTGCATGATCAGAGTGCTGKCTTTATAAGACTCTTCATTACAGCGT
ATCCAATTCAGCAATTGCTTCATCAAATGCCGTTTTTGCCAGGCTACAGGCCTTTTCAGGA
GAGTTTAGAATCTCATAGTAAAAGACTGAGAAATTTAGTGCCAGACCAAGACGAATTGGG
TGTGTAGGCTGCATTNCTTTCTTACTAAATTTCAAATGCTTCCTGGTAAGCCTGCTGGGAGTT
CGACACAAGTGGTTTTGTTTGCTCCAGATGCCACTTCAGAAAGATACCTAAAATAATCT
CCTTTCAATTTCAAAGTAGAACAC

13700.2

TCCGGAGCCGGGGTAGTGGCCGGGGGGGGGGGGGGTCCAGCCACTGCAGGCACCGCTGCC
GCGGCCTGAGTAGTGGGCTTAGGAAGCAAGAGGTCACTCGCTCGGAGCTTCGCTCGGAA
GGGTCTTTGTTCCCTCCAGCCCTCCAGGGGAATGACAAATGGATAAAAGTGAGCTGGTACA
GAAAGCCAAACTCGCTGAGCAGCCTGAGCGATATGATGATATGGCTGCAGCCATGAAGGC
AGTCACAGAACAGGGGCATGAACCTCTCCAACGAAGAGAGAAATCTGCTCTCTGTTGCCA
CAAGAATGTGCTAAGGGCCGGCCGGGGCTCTTCTGGCGTGTCATCTCCAGCATTGAGCAGA
AAACACAGAGGAATGAGAAACAAGCAGCAGATGGGCAAGAGTACCGTGAGAAAGATAGA
GGCAGAACTCCAGGACATCTGCAATGATGTTCTGGAGCTTGTTGGACAAATATCTTATTCC
AATGCTACACAACCCAGAAA

13701.1

AAAAAGCAGCARGTTCAACACAAAAATAGAAAATCTCAAATGTAGGATAGAAACAAAACCAA
GTGTGTGAGGGGGGAAGCAACAGCAAAAGGAAGAAATGAGATGTTGCCAAAAAGATGGA
GGAGGGTTCCCTCTCTCTGGGGACTGACTCAAAACACTGATGTGGCAGTATACACCAATC
CAGAGTCAGGGGTGTTCAATCTTTTGGCAGTAAGAAAAGGTGGGGATTAAAGAAAGCGT
TTCTGGAGGCTTAGGGACCAAGGCTGGTCTCTTTCCCCCTCCCAACCCCTTGATCCCTTT
CTCTGATCAGGGCAAGGAGCTCGAATCAGGGAGGTAGAGTTGGAAAGGGAAAGGATTG
CACTTGACAGAATGGGACAGACTCCTTCCCA

FIG. 15J

13701.2

TGGCAATAGCACAGCCATCCAGGAGCTCTTCARGCGCATCTCGGAGCAGTTCACTGCCATG
TTCCGCCGGAAGGGCTTCCTCCACTGGTACACAGGCGAGGGCATGGACGAGATGGAGTTC
ACCGAGGCTGAGAGCAACATGAACGACCTCGTCTCTGAGTATCAAGCAGTACCAGGATGC
CACCGCAGAAAGAGGAGGAGGATTTTCGGTGAGGAGGCCGAAGAGGAGGCCTAAGGCAGAG
CCCCATCACCTCAGGCTTCTCAGTTCCCTTAGCCGTCTTACTCAACTGCCCCCTTCCTCTCC
CTCAGAAATTTGTGTTTGCTGCCTCTATCTTGTTTTTTTCTTCTGGGGGGGTCTAGAA
CAGTGCTGGCACATAGTAGGCGCTCAATAAATACTTGCTTGNTGAATGTCTCT

13702.2

AGCTGGCGCTAGGGCTCGGTTGTGAAATACAGCGTRGTCAGCCCTTGCGCTCAGTGTAGAA
ACCCACGCCTGTAAGGTTCGGTCTTCGTCCATCTGCTTTTTTCTGAAATACACTAAGAGCAG
CCACAAAACCTGTAACCTCAAGGAAACCATAAAGCTTGGAGTGCCTTAATTTTAAACCAGTT
TCCAATAAAACGGTTTACTACCT

13704.2-13740.2

GGAGATGAAGATGAGGAAGCTGAGTCAGCTACGGGCGARGCGGGCAGCTGAAGATGATGA
GGATGACGATGTCGATACCAAGCAGCAGACCGACGAGGATGACTAGACAGCAAAAA
AGGAAAAAGTTAAA

13706.1

GATGAAAATTAATACTTAAATTAATCAAAAAGGCACTACGATACCACCTAAAACCTACTG
CCTCAGTGGCAGTAKGCTAAKGAACATCAAGCTACAGSACATYATCTAATATGAATGTTA
GCAATTACATAKARGAAGCATGTTTGGCTTTCAGAAAGACTATGGNACAAATGGTCATTWG
GGCCCAAGAGGATAATTTGGCCNGCAAAGCATCAAGATAGATNAANGTAAAG

13706.2

GAGTAGCAACGCAAAGCGCTTGGTATTGAGTCTGTGGGSGACTTCGGTTCCGGTCTCTGCA
GCAGCCGTGATCGCTTAGTGGAGTGCTTAGGGTAGTTGGCCAGGATGCCGAATATCAAAA
TCTTCAGCAGGCAGCTCCCACCAGGACTTATCTCASAAAATTGCTGACCGCCTGGCCCTGG
AGCTAGGCAAGGTGGTGACTAAGAAATTCAGCAACCAGGAGACCTGTGTGGAAATTGGTG
AAAGTGTAACCGTGGAGAGGATGTCTACATTTCTCAGAGTGGNTGTGGCGAAATCAATGAC
AATTTAATGGAGCTTTTGATCATGATTAATGCCTGCAAGATTGCTTCAGCCAGCCGGGTTA
CTGCAGTCATCCCATGCTTCCCTTATGCCCGGCCAGGATAAGAAAGATNAGAGCCGGGCC
GCCAATCTCAGCCAAGCTTGGTGCAAAATATGCTATCTGTAGCAGTGCAATCATATTATCA
CCATGGACCTACATGCTTCTCAAAATTCANGGCTTTTT

FIG. 15K

13707.3

ATGCAAAAGGGGACACAGGGGGTTCAAAAATAAAAAATTTCTTTCCCCCTCCCCAAACCT
GTACCCCAAGCTCCCCGACCACAAACCCCTTTCCTCCCCCGGGGAAAGCAAGAAGGAGCAGG
TGTGGCATCTGCAGCTGGGAAGAGAGACGCCGGGGAGGTGCCGAGCTCGGTGCTGGTCTC
TTTCCAAATATAAAATACGTGTGTGTCAGAACTGGAAAAATCCTCCAGC.ACCCACCACCCAAGCA
CTCTCCGTTTTCTGCCGGTGTGTTGGAGAGGGGCGGNGGGCAGGGGCGCCAGGCACCGGCT
GGCTGCCGGTCTACTGCATCCGCTGGGTGTGCACCCCGCGA

13710.2

AGGTTGGAGAAGGTCATGCAGGTGCAGATTGTCCAGGSKCAGCCACAGGGTCAAGCCCAA
CAGGCCCAGAGTGGCACTGGACAGACCATGCAGGTGATGCAGCAGATCATCACTAACACA
GGAGAGATCCAGCAGATCCCGGTGCAGCTGAATGCCGGCCAGCTGCAGTATATCCGCTTA
GCCCAGCCTGTATCAGGCACTCAAGTTGTGCAGGGACAGATCCAGACACTTGGCCACCAAT
GCTCAACAGATTACACAGACAGAGGTCCAGCAAGGACAGCAGCAGTTCAAGCCAGTTTAC
AAGATGGACAGCAGCTCTACCAGATCCAGCAAGTCACCATGCCTGCGGGCCANGACCTCG
CCAGCCCATGTTTATCCAGTCAAGCCAACCAGCCCTTCNACGGGCAGGCCCCCAGGTGAC
CGGCGACTGAAGGGCCTGACCTGGCAAGGCCAANGACACCCAACACAAATTTTTGCCATAC
AGCCCCCAGGCAATGGGCACAGCCTTTCTTCCAGAGGAC

13710-1

TGAGATTTATTGCAATTCATGCAGCTTGAAGTCCATGCCAAAGGRCAGTACAGTTTTTTA
ATGCCATTTAAAAATAAAACCGAGGTGGGCAACACACAAAGTCTAGTTTCTGGG
TCCCTGGGAGAAAAGAGTGTGGCAATGAATCCACCCACTCTCCACAGGGAATAAATCTGT
CTCTTAAATGCCAAACAATGTTTCCATGGCTCTGGATGCCAAATACACAGAGCTCTGGGGT
AGAGCAAGGGATGGGGAGAGGACCAGGAGTGAATAAGCAGCTACACACATTCACCTAAT
TCCATCTGAGGGCAAGAACACAGCTGGCAAGTCTTGGGGTACCAGCTGTT

13711.1

TCCAGACATGCTCCTGTCTAGGCGGGGACCAGGAACCAGACCTGCTATGGGAAGCAGAA
AGAGTTAAGGGAAGGTTTCTTTCATTCCTGTTCTTCTTTTGGTTTTGAACAGTTTTTA
AATATACTAATAGCTAAGTCAATTCGCCAGCCAGGTCCCCGTGAACAGTAGACAAACAAGGA
GCTTGCTAAGAATTAATTTTCTGT.TTTT.CACCCCA.TTC.AAACAGAGCTGCCCTGTTCCCTG
ATGGAGTTCCATTCCTGCCAGGGCAGGCTGAGTAACACGAAGCCATTCAAGAAAGGCGG
GTGTGAATCACTCCCACCCCATGGACAGACCCCTCACTCTTCTTCTTACCCGCAGGCT
ACTTAATAAATAATA.TTATACTTTGAAATTAATGA.AACCGA.TTTTCCCATGCGGCATCTA
ACGGCACTTGCCAGCTCTTATCCGGACAGTCAAGCACTGTTGTTGGACAACAGATAAAGG
AAAGAAAAAGAAAGAAACACCCCAACTTCTGT

FIG. 15L

13711.2

TGAGACGGACCACTGGCCTGGTCCCCCTCATKTGCTGTCTGTAGGACCTGACATGAAACGC
AGATCTAGTGGCAGAGAGGAAGATGATGAGGAACTTCTGAGACGTCGGCAGCTTCAAGAA
GACCAATTAATGAAGCTTAACCTCAGGCCTGGGACAGTTGATCTTGAAAGAAGAGATGGAG
AAAGAGAGCCGGGAAAGGTCACTCTGTAGCCAGTGGCTACGATTCTCCCATCAACTCAG
CTTCACATAATCCATCATCTAAAACTGCATCTCTCCCTGGCTATGGAAGAAATGGGCTTCA
CCGGCCTGTTTCTACCGACTTCGCTCAGTATAACAGCTATGGGGATGTCAGCGGGGGAGTG
CGAGATTACCAGACACTTCCAGATGGCCACATGCCCTGCAATGAGAATGGACCGAGGAGTG
TCTATGCCCCAACATGTTGGAACCAAGATATTTCCATATGAAATGCTCATGGTGACCAACA
GAGGGCCGAAACCAAAATCTCAGAGAGGTGGACAGAA

13713.1&2

TCACTTTATTTTTCTTGTATAAAAAACCTATGTTGTAGCCACAGCTGGAGCCTGAGTCCGCT
GCACGGAGACTCTGGTGTGGGTCTTGACGAGGTGGTCAGTGAACTCCTGATAGGGAGACT
TGGTGAATACAGTCTCCTTCCAGAGGTGCGGGGTCAGGTAGCTGTAGGTCTTAGAAATGGC
ATCAAAGGTGGCCTTGGCGAAGTTGCCAGGGTGGCAGTGCAGCCCCGGGCTGAGGTGTA
GCAGTCATCGATACCAGCCATCATGAG

13715.4

CTGGAATATAGACCCGTGATCGACAAAACCTTGAACGAGGCTGACTGTGCCACCGTCCCGC
CAGCCATTGCTCCTACTGATGAGACAAGATGTGGTGATGACAGAATCAGCTTTGTAAAT
ATGTATAATACCTCATGCATGTGTCCATGTCTATAACTGTCTTCATACGCTTCTGCACTCTGG
GGAAGAAGGAGTACATTGAAGGGAGATTGGCACCTAGTGGCTGGGAGCTTGGCAGGAACC
CAGTGGCCAGGGAGCGTGGCACTTACCTTTGCTCCTTGCTTCATTCTTGTGAGATGATAAA
ACTGGGCACAGCTCTTAAATAAATATAAATGAACA

13717.1&2

TGAATGGGGAGGAGCTGACCCAGGAAATGGAGCTTGNGGAGACCAGGCCTGCAGGGGAT
GGAACCTTCCAGAAGTGGGCATCTGTGGTGGTGCCTCTTGGGAAGGAGCAGAAGTACACA
TGCCATGTGGAACATGAGGGGCTGCCTGAGCCCCCTCACCTGAGATGGGGCAAGGAGGAG
CCTCCTTCATCCACCAAGACTAACACAGTAATCATTTGCTGTTCCGGTTGTCTTGGAGCTGT
GGTCATCCTTGGAGCTGTGATGGCTTTGTGATGAAGAGGAGGAGAAACACAGGTGGAAA
AGGAGGGGACTATGCTCTGGCTCCAGGCTCCAGAGCTCTGATATGTCTCTCCAGATTGT
AAAGTGTGAAGACAGCTGCCCTGGTGTGGACTTGGTGACAGACAATGTCTTCACACATCTCC
TGTGACATCCAGAGACCTCAGTTCTCTTAAGTCAAGTGTCTGATGTTCCCTGTGAGTCTGCG
GGCTCAAAGTGAAGAAGTGTGGAGCCCACTCCACCCCTGCACACCAGGACCTATCCCTG
CACTGCCCTGTGTCTCCCTTCCACAGCCAACTTGGCTGCCAGCCAAACATTGGTGGACAT
CTGCAGCCTGTGAGCTCCATGCTACCTGACCTTCAACTCCTCACTTCCACACTGAGAATA
ATAATTTGAATGTGGGTGGCTGGAGAGATGGCTCAGCGCTGACTGCTCTTCCAAAGGTCT
GAGTTCAAATCCCAGCAACCACATGGTGGCTCACAACCATCTGTAATGGGATCTAATACCC
TCTTCTGCAGTGTCTGAAGACASCTACAGTGTACTTACATATAATAAATAAATAAG

FIG. 15M

13719.1&2

GGCCGGGCGCGCGCGCCCCCGCCACACGCACGCCGGCGTCCAGTTTATAAAGGGAGAG
AGCAAGCAGCGAGTCTTGAAGCTCTGTTTGGTGCTTTGGATCCATTTCCATCGGTCTTAC
AGCCGCTCGTCAGACTCCAGCAGCCAAGATGGTGAAGCAGATCGAGAGCAAGACTGCTTT
TCAGGAAGCCTTGGACGCTGCAGGTGATAAACTTGTAGTAGTTGACTTCTCAGCCACGTGG
TGTGGGCTTGC AAAATGATCAAGCCTTTCTTTCAATCCCTCTCTGAAAAGTATTCCAACGT
GATATTCTTGAAGTAGATGTGGATGACTGTGAGGATGTTGCTTCAGAGTGTGAAGTCAAA
TGCATGCCAACATTCCAGTTTTTTAAGAAGGGACAAAAGGTGGGTGAATTTTCTGGAGCCA
ATAAGGAAAAGCTTGAAGCCACCAATTAATGAATTAGTCTAATCATGTTTTCTGAAAATATA
ACCAGCCATTGGCTATTTAAACTTGTAAATTTTAAATTTACAAAATATAAAATATGAA
GACATAAACCCMGTTGCCATCTGCGTGACAATAAAACATTAATGCTAACACTT

13721.1

TCACATAAGAAATTTAAGCAAGTTACRCTATCTTAAAAAACACAACGAATGCATTTTAATA
GAGAAACCTTCCCTCCCTCCACCTCCCTCCCCACCTCCTCATGAATTAAGAATCTAAG
AGAAGAAGTAACCATAAAACCAAGTTTGTGGAATCCATCATCCAGAGTGCCTTACATGGT
GATTAGGTAAATATTGCTTCTTACAAAATTTCTATTTTAAAAAAAATTATAACCTTGATTG
CTTATTACAAAAAATTCAGTACAAAAGTTCAATATATTGAAAAATGCTTTTCCCTCCCT
CACAGCACCGTTTTATATATAGCAGAGATAAATGAAGAGATTGCTAGTCTAGATCGGGCA
ATCTTCAAATTACACCAAGACCCACAGTGGTTTTATTACCCTCCCTTCTCATAAG

13721.2

GGAAAGGATTCAAGAAATTAGAGGACTTGGCTTGGCTRRAGAAAAAGACAACCTCTCGTGGCAT
GCTGACAGACAAAGAGAGAGAGATGGCCGAAATAAGGGATCAAATGCAGCAACAGCTGA
ATGACTATGAACAGCTTCTTGAATGTAAGTTAGCCCTGGACATGGAAATCAGTGCTTACAG
GAAACTCTTAGAAGGCCAAGAAGAGAGGTTGAAGGTGTCTCCAAGCCCTTCTTCCCGTGT
GACAGTATCCCGAGCATCCTCAAGTCTTAGTGTACCGTACAACCTAGAGGAAGCGGAAGA
GGGTTGATGTGGAAGAATCAGAGGCCGAAGTAGTAGTGTAGCATCTCTCATTCGGCTCAA
CCACTGGAAATGTTTGCAATCGAAGAAAATGATGTTGATGGGAAATTTATCCCGCTTGAAGA
ACACTTCTGAACAGGATCAACCAATGGGAAGCCTTGGGAGATGATCAGAAAAATTGGAGA
CACATCAGTCAGTTATAAATATACCTCAA

13723.1

CATGGGTTTCACCAGGTTGGCCAGGCTGCTTGAACCTCTGACCTCAGGTGATCCACCCG
CCTCGGCCCTCCCAAAGTCTGGGATTACAGCCGTGACCCACCACGCCCGGCCCCCAAAGC
TGTTTCTTTTGTCTTTAGCGTAAAGCTCTCTGCCATGCAATCTACATAACTGACGTGAC
TGCCAGCAAGCTCAGTCACTCCGTGCTTTTCTCTTTCCAGTTCTTCTCTCTCTCAAG
TTCTGCCTCAGTGAAGCTGCAGGTCCCCAGTTAAGTGATCAGGTGAGGGTTCTTTGAACC
TGGTTCTATCAGTCGAATTAATCCTTCATCATGG

FIG. 15N

13723.2

GATGTGTTGGACCCTCTGTGTCAAAAAAACCTCACAAAGAAATCCCCTGCTCATTACAGAA
GAAGATGCAATTAATAATATGGGTTATTTTCAACTTTTTATCTGAGGACAAGTATCCATTAA
TTATTGTGTCAGAAGAGATTGAATACCTGCTTAAGAAGCTTACAGAAGCTATGGGAGGAG
GTTGGCAGCAAGAACAATTTGAACATTATAAAATCAACTTTGATGACAGTAAAAATGGCC
TTCTGTCATGGGAACCTTATTGAGCTTATTGGAATGGACAGTTTAGCAAAGGCATGGACCG
GCAGACTGTGTCATATGGCAATTAATGAAGTCTTTAATGAACCTTATATTAGATGTGTTAAAG
CAGGGTTACATGATGAAAAAGGGGCCACAGACGGAAAACTGGACTGAAAGATGGTTTGTA
CTAAAACCCAACATAATTTCTTACTATGTGAGTGAGGATCTGAAGGATAAGAAAGGAGAC
ATTCTCTTGGATGAAAAATTGCTGTGTAGAAGTCCTTGCTGACAAAAGATGGAAAGAAAT
GCCTTTT

13725.1

GA CTGGTTCTTTATTTCAAAAAGACACTTGTCAATATTCAGTRTCAAAACAGTTGCACTATT
GATTTCTCTTTCTCCCAATCGGCCCCAAAGAGACCACATAAAAAGGAGAGTACATTTTAAGC
CAATAAGCTGCAGGATGTACACCTAACAGACCTCCTAGAAACCTTACCAGAAAAATGGGGA
CTGGGTAGGGAAGGAACTTAAAAGATCAACAACTGCCAGCCACGGACTGCAGAGGCT
GTCACAGCCAGATGGGGTGGCCAGGGTGGCCACAAACCCAAAGCAAAAGTTTCAAAATAATA
TAAAATTTAAAAAGTTTTGTACATAAGCTATTCAAGATTTCTCCAGCACTGACTGATACAA
AGCACAATTGAGATGGCACTTCTAGAGACAGCAGCTTCAAACCCAGAAAAGGGTGATGAG
ATGAAGTTTCAATGGCTAAAATCAGTGGCAAAAACACAGTCTTCTTTCTTTCTTTCTTCAA
GGANGCAGGAAAGCAATTAAGTGGTCACCTTAACATAAGGGGGAC

13725.2

TGGGTGGGCACCATGCGTGGGATCACCACCATCGAGGCGGTGAAGCCCAAGATCCAGGTT
CTGCAGCAGCAGGCAGATGATGCAGAGCAGCGAGCTGACCGCCTCCAGCGAGAAGTTGA
GGGAGAAAAGCGGGGGCCGGGAACAGGCTGAGGCTGAGGTGGCCTCCTTGAACCGTAGGA
TCCAGCTGCTTGAAGAAGAGCTGGACCGTGGCTCAGGAGCGCCTGGCCACTGCCCTGCAAA
AGCTGGAAGAAGCTGA AAAAGCTGCTGATCAGAGTGAGAGAGGTATGAAGGTTATTGAA
AACCGGGCCTTAAAAGATGAGAAAAGATGCAACTCCAGGAAATCCAACCTCAAAGAAGC
TAAGCACATTGAGAGAGAGGCAGATAGGAAGTATGAAGAGGTGGCTCGTAAGTTGGTGAT
CATTGAAGGAGACTTGGAAACCGCACAGAAGGAACGAGCTTGACCTTGGCAAAAAGTCCCGT
TGCCACAGAGATGGGATGAACACAGATTAGACTGATGGACCANAACC

13726.1&2

AGGGGCGNCGGGGTGCGTGGGCCCCTGGGTGACCGACTTAGCCTGGCCAGACTCTCAGCAC
CTGGAAGCGCCCCGAGAGTGACAGCCTGAGGCTGGGAGGGAGGACTTGGCTTGAGCTTGT
TAAACTCTGCTCTGAGCCTCCTTGTGGCCTGCAATTAGATGGCTCCCGCAAAGAAGGGTGG
CGAGAAGAAAAAGGGCCGTTCTGCCATCAACGAAGTGGTAACCCGAGAAATACACCATCAA
CAATTCACAAGCGCATCCATGGAGTGGCTTCAAGAAGCGTGACCTCGGGCACTCAAAGA
GATTGGAATAATTTGCCATGAAGGAGATGGGAACCTCCAGATGTCCGCATTGACACCAGGCT
CAACAAAGCTGTCTGGGCGCAAGCAATAAGGAATGTGCCATACCGAATCCGGTGTGGGGC
TGTCACAGAAAACGTAAATCAGGATGAAGATTACCAAAATAAGCTATATACTTTGGTTACCTA
TGTACCTGTTACCACTTTCAAAAAATCTACAGACAGTCAATGTGGATGAGAACTAATCGCTG
ATCGTCAGATCAAAATAAAGTTATAAAAT

FIG. 150

13727.1

TCGGGAGCCACACTTGGCCCTCTTCTCTCCAAAGSGCCAGAACCTCCTTCTCTTTGGAGAA
TGGGGAGGCCCTCTTGGAGACACAGGGTTTCACCTTGGATGACCTCTAGAGAAAATTGCC
CAAGAAGCCACCTTCTGGTCCCAACCTGCAGACCCACAGCAGTCAGTTGGTCAGGCCCT
GCTGTAGAAGGTCACTTGGCTCCATTGCTGCTTCCAACCAATGGGCAGGAGAGAAGGCC
TTTATTTCTCGCCACCCATTCTCTCTGTACCAGCACCTCCGTTTTAGTCAGTGTGTGCCA
GCAACGGTACCGTTTACACAGTCACCTCAGACACACCAATTCACCTCCCTTGCCAAAGCTGT
TAGCCTTAGAGTGATTGCAGTGAACACTGTTTACACACCGTGAATCCAATCCCATCAGTCC
ATTCCAGTTGGCACCAGCCTGAACCAATTTGGTACCTGGTGTAACTGGAGTCCTGTTTACA
AGGTGGAGTCGGGGCTTGCTGACTTCTCTTCAATTTGAGGGCAC

13727.2

ACCTAGACAGAAGGTGGGTGAGGGAGGACTGGTAGGAGGCTGAGGCAATTCCTTGGTAGT
TTGTCCTGAAACCCTACTGGAGAAGTCAGCATGAGGCACCTACTGAGAGAAGTGCCCA
AACTGCTGACTGCATCTGTAAAGAGTTAACAGTAAAGAGGTAGAAGTGTGTTTCTGAATCA
GAGTGGAAAGCGTCTCAAGGGTCCCAAGTGGAGGTCCCTGAGCTACCTCCCTTCCGTGAGT
GGGAAGAGTGAAGCCCATGAAGAAGTGAAGCAAGGATGGGGTTCCTGGGGCTCCA
GGCAAGGGCTGTGCTCTCTGCAGCAGGGAGCCCCACGAGTCAGAAAGAAAGAACTAATCA
TTTGTTCAGAAACCTTGCCCGGATACTAGCGGAAAAGTGGAGGCGGNGGTGGGGGCAC
AGGAAAGTGGAAGTGATTTGATCGAGAGCAGAGAAGCCTATGCCACAGTGGCCGAGTCCAC
TTGTAAGTG

13728.1&2

TTCAAGCAATTGTAACAAGTATATCTAGATTAGAGTGAGCAAAATCATATACAAATTTTCAT
TTCCAGTTGCTATTTTCCAAATTGTTCTGTAAATGTCGTTAAAATTACTTAAAAATTAACAAA
GCCAAAAATTATAATTATGACAAGAAAGCCATCCCTACATTAATCTTACTTTTCCACTCAC
CGCCCCATCTCTTCTCTTTTCTCTAATATGCCATTAATACTGTTCTACTGGGCGGGCG
TGTGGCTCATGCCCTGTAATCCAGCAATTTGGGAGGCCAAGGCAGGCGGATCATGAGGTC
AAGAGATTGAGACCATCCTGGCCAACATGGTCAAAACCCCGCCTCGACTAAGAATACAAA
ATTAGCTGGGCATGGTGGCCATGCCCTGTACTCTCAGCTACTCGGGAGGCTGAGGCAGAA
GAATCGCTTGAACCCGGGAGGCAGAGGATGCGAGTGAGCCCCGATCGGCCACTGCCTCT
AGCCTGGGCGACAGACTGAGACTCTGCTC

13731.1&2

TGTGCCAGTCTACAGCCCTATCAGCAGCCACTCCTTCAGCAACAGATGGGGTCCCCCTGTTT
AGCCCAACCCCATGAGCCCCAGCAGCATATGCTCCCAATCAGGCCCCAGTCCCCACACCT
ACAAGGCCAGCAGATCCCTAAATCTCTCTCCAAATCAAGTGGCTCTCCCCAGCCTGTCCCTT
CTCCACGCCACAGTCCCAGCCCCCACTCCAGTCTTCCCCAAGGATGCAGCCTCAGCC
TTCTCCACACCAGTTTCCCCACAGACAAGTTCCCCACATCTGGACTGGTAGTTGCCAG
GCCAACCCCATGGAACAAGGGCAATTTGCCAGCC

FIG. 15P

13734.1&2

TGTA AAAA ACTTGT TTTTA A TTTTGTATA AAAATAAAGGTGGTCCATGCCCACGGGGGCTGTAGGAAATCCAAGCAGACCACTGGGGTGGGGGGATGTAGCCTACCTCGGGGGACTGTCTGTCTCAAAAACGGGCTGAGAAGGCCCGTCAGGGGCCAGGTCCCACAGAGAGGCCTGGGATCTCCCCAACCCGAGGGGCAGACTGGGCAGTGGGGAGCCCCCATCGTGCCCCAGAGGTGCCACAGGCTGAAGGAGGGGCCTGAGGCACCGCAGCCTGCAACCCCCAGGGCTGCAGTCCAATAACTTTTTACAGAAATAAAAGGAACATGGGGATGGGGAAAAAAGCACCAGGTCAAGGCA GGGCCGAGGGCCCCAGATCCCAGGAGGCCCGCCACGGATTGGCACAGGCCGCTGCTGGCCAGCTCCACAGCTCCTGGCACAGGAGGCCCGCCACGGATTGGCACAGGCCGCTGCTGGCCATCACGCCACATTTGGAGAACTTGTCCCGACAGAGGTCAAGCTCGGAGGAGCTCCTCGTGGGCACACACTGTACGAACACAGATCTCCTTGTTAATGACGTACACACGGCGGAGGCTGCGGGACAGGGCACGGGAGGTCTCAGCCCCACTT

13736.2

ATGGCTGCTGGATTTACGTGGTAATAGGGGCTGTGGGCCATAAATCTGAAGCCTTGAGAACTTGGGTCTGGAGAGCCATGAAGAGGGAAGGAAAGAGGGCAAGTCTCTGAACCTAACC AATGACCTGATGGATTGCTCGACCAAGACACAGAAGTGAAGTCTGTGTCTGTGCACTTCCACAGACTGGAGTTTTTGGTGCTGAATAGAGCCAGTTGCTAAAAAATTGGGGGTTTGGTGAAGAAATCTGATTGTGTGTGTATTC AATGTGTGATTTTAAAAATAAACAGCAACAACAATAAAAACCTGACTGGCTGTTTTTCCCTGTATTCCTTACAACCTATTTTTTGACCCTCTGAAAA TTATTATACTTCACCTAAAATGGAAGACTGCTGTGTTTTGTGGAAATTTTGTAAATTTTTTAATTTATTTTATCTCTCTCTCTTTTATTTTCCCTGCAGAAATCCGTTGAGAGACTAATAAGGCTTAATATTTAATTGATTTGT TAAATATGTATATAAAT

13744.2-13696.2

GGCATCGGAGCCCACTCGGGGACCCAAAGGGCGGGCGGGAGGCACACGGAGCACTGCCAGGCGCCGGGTTGGGACAGCCGCTCTTGGCTGCTGGATAGTCGTGTTTTCGGGGATCGAGGATACTACCCAGAAACCGAAATAATGCGGAACCAATCAATGTCCGAGTTACCACCATGGATGCA GAGCTGGAGTTTGC AATCCAGCCAAATACAACTGGAAAACAGCTTTTTGATCAGGTGGTA AAGACTATCGGCCTCCGGGAAGTGTGCTACTTTGGCCTCCACTATGTGGATAATAAAGGATTTCCCTACCTGGCTCAAGCTGCAATAGAAAGGTGCTGCCCCAGGAGGTCAAGGAAGGAGAATCC CCGTCCAGTTCAAGTTCCGGGCCAAAGTTCTACCTGAAGATGTGGCTGAGGAGCTCATCCAGGACATCACCCAGAAACTTTCTTCTCTCAAGTGAAGGAAGGAATCCTTAGCGATGAGATCTACTGCCCCCTTGARACTCCCGTGTCTTGGGGTCTACGCTTGTGCATGCCAAGTTTTGGG GACTACCACCAAGAAG

13746.1&2-13720.1&2

GAAGGAGTGGGATACTCAGCAATGATGCCACCCCAATTTCAAAGCGGCATTCTTCGGCAGGTCTCTGGGACAAATCTTAGGGTCACTACCTGCAAACTCGTTAGGGTACAACCTGAATGCTGAAAGGAAAGAACACCTGCAGAACCGACAGAAATTCACCCCGGCGATCAGCTGATTGATCTCGGTCCAGCAGAAGTCAATGGCTAAAGATCAGCAGGACGTTGTCAATTCCTTGGGCTTTTGAAGTGAGTCCAGCAGCACTGTGAGGTATTCGGGCGGTTATGCACTGGACCACAGCA CCAGCTCCCGGGGGGGCCAGGTGCCACCTTATCTACATTCCTCAGGGTCTGATCAAAGTT CAGCTGGTACACCAGGGACCGGTACCGCAGCGTCAGGTTGTCCGCTCGGGCTGGGGGACC GCCGGGACCAGGGAAGCCGGCCGACAGGTTGAGACCCCTGCGGATGCCACACGCCACAGAG GGGTGGTCCCCACCGCGGGCCCGGGCACCCCGCGCGGTTCCGGCTCCACCAACGGTGGG GCGAGGGCCTCGTTCTTCTTCTTCTGCCCCATTCCTGCTCCAGAGGACGAAGCCGCAGGCGGCCACCAAGAGCGCTCAGGATTAGCACCTTCCGTTTGTAGATGCCGAACCTCATGGTCTCCAGGCCCGGAGCGCAGCTACAGCTCGAGCCTCGCGCGCCCGCTAGGAGCCCGCGCTCGGCTTCGTCTCCGTCTCTCCATTCAGCACCAAGGGTCCCGGAAAAAGCTCAGCCSCGGTCCCAA CCGCACCTAGCTTCGTTACCTGCGCCTCGCTTC

FIG. 15Q

14347.1

CAGATTTTATTTGTCAGTCGTCCTGGGGCCGTTTCTTGCTGCTTATTTGTCTGCTAGCCTG
CTCTTCCAGCTGCATGGCCAGGCCCAAGGCCTTGATGACATCTCGCAGGGCTGAGAAATGC
TTGGCTTGCTGGGCCAGAGCAGATTCCGCTTTGTTTACAAAAGGTCTCCAGGTCATAGTCTG
GCTGCTCGGTTCATCTCAGAGAGCTCAAGCCAGTCTGGTCTTGTGTATGATCTCCTTGAG
CTCTTCCATAGCCTTCTCCTCCAGCTCCCTGATCTGAGTCATGGCTTCGTTAAAGCTGGACA
TCTGGGAAGACAGTTCTCCTCTCTCCTTGGATAAAATTGCCTGGAATCAGCGCCCCGTTAGA
GCAGGCTTCCATCTCTTCTGTTTCCATTTGAATCAACTGCTCTCCACTGGGCCCCACTGTGGG
GGCTCAGCTCCTTGACCCTGCTGCATATCTTAAGGGTGTTTAAAGGATATTCACAGGAGCT
TATGCCTGGT

14347.2

CTCCTCTTGGTACATGAACCCAAAGTTGAAAAGTGGACTTAACAAAGTATCTGGAGAACCAA
GCATTCTGCTTTGACTTTGCATTTGATGAAACAGCTTCGAATGAAGTTGTCTACAGGTTTAC
AGCAAGGCCACTGGTACAGACAATCTTTGAAGGTGGAAAAGCAACTTGTITTTGCATATGG
CCAGACAGGAAGTGGCAAGACACATACTATGGGCGGAGACCTCTCTGGGAAAGCCCCAGAA
TGCATCCAAAGGGATCTATGCCATGGCCTTCCGGGACGTCTTCTTCTGAAGAATCAACCTT
GCTACCGGAAGTTGGGCTTGGAAAGTCTATGTGACATTCTTCGAGATCTACAATGGGAAGCT
GTTTGACCTGCTCAACAAGAAGCCCCAAGCTTGGCGTGCTGGAAGACGGCAAGCAACAGG
TGCAAGTGGTGGGGCTTGCAGGAACATCTGGNTAACTCTGCTTGATGATGGCANTCAAG
ATGATCGACATGGGCAGCGCTCCAGA

14348.1&14350.1&2

TCCCGAATTCAGCGACAAAATGGAWAGTGAATGGAAGATGCCTATCATGAACATCAGG
CAAACTTTTCCGCCAAGATCTGATGAGACGACAGGAAGAAATTAAGACGCATGGAAGAAC
TTCACAATCAAGAAAATGCAGAAACGTAAAGAAAATGCAATGAGGCAAGAGCGAGGAACGA
CGTAGAAGAGAGGAAGAGATGATGATTCGTCAACGTGAGATGGAAGAACAATGAGGCG
GCAAGAGAGGAAGATTACAGCCGAAATGGGCTACATGGATCCACGGGAAAGAGACATGC
GAATGGGTGGCGGAGGAGCAATGAACATGGGAGATCCCTATGGTTACGGAGGCCAGAAA
TTTCCACCTCTAGGAGGTGCTGCTGGCAATGTTATGAAGCTAATCCTGGCGTTCCACCAG
CAACCATGAGTGGTTCCATGATGGCAAGTGACATGCGTACTGAGCGCTTTGGGCAGGGAG
GTGCGGGGCTGTGGGTGGACAGGGTCTAGAGGAATGGGGCCTGGAATCCAGCAGGAT
ATGCTAGAGGGAGAGAAGAGTACCAAGGC

14349.1&2

TTCGTGAAGACCCTGACTGGTAAGACCATCACTCTCGAAGTGGAGCCCCGAGTGACACCAAT
GAGAATGTCAAGGCCAAGATCCAAGACAAGGAAGGCATCCCTCCTGACCAGCAKAGGTTG
ATCTTTTGGCTGGGAAACAGCTGGAAGATGGACGCACCTGTCTGACTACAACATCCAGAAA
GAGTCCACCCTGCACCTGGTGTCTCGTCTCAGAGGTGGGATGCAAAATCTTCTGTGAAGACCC
TGACTGGTAAGACCATCACCTCGAGGTGGAGCCCAAGTGACACCATCGAGAAATGTCAAGG
CAAAGATCCAAGATAAGGAAGCCATCCCTCCTGATCAGCAGAGGTTGATCTTTGCTGGGA
AACAGCTGGAAGATGGACGCACCTGTCTGACTACAACATCCAGAAAGAGTCCACTCTGC
ACTTGGTCTGCGCTTACGGGGGGCTGTCTAAGTTTCCCTTTTAAAGGTTTCAACAAATTC
ATTGCACTTTCCTTTCAATAAAGTTGTTGCATT

FIG. 15R

17183.2

GGTTCACAGCACTGCTGCTTGTGTGTTGCCGGCCAGGAATTCAGGCTCACAAGGCTATCT
TAGCAGCTCGTCTCCGGTTTTAGTGCCATGTTTGAACATGAAATGGAGGAGAGCAAAAA
GAATCGAGTTGAAATCAATGATGTGGAGCCTGAAGTTTTTAAGGAAATGATGTGCTTCATT
TACACGGGGAAGGCTCCAAACCTCGACAAAAATGGCTGATGATTTGCTGGCAGCTGCTGAC
AAGTATGCCCTGGAGCGCTTAAAGGTCAATGTGTGAGGATGCCCTCTGCAGTAACCTGTCCG
TGGAGAACGCTGCAGAAATTCATCCTGGCCGACCTCCACAGTGCAGATCAGTTGAAAA
CTCAGGCAGTGGATTTCAATCAACTATCATGCTTCGGATGTCTTGGAGACCTCTTGGG

17186.1&2

TCGTAGCCATTTTTCTGCTTCTTTGGAGAATGACGCCCACTGACTGCTCATTTGTCGTTGGT
TCCATGCCAATTGGTGAATAGAACCTCATCCGGTAGTGGAGCCGGAGGGACATCTTGTG
ATCAACGGTGATGGTGGGATTTGGAGCATACCAGAGCTTGGTGTCTCGCCATACAGGGCA
AAGAGGTTGTGACAAAGAGGAGAGATACGGCATGCCTGTGCAGCCCTGATGCACAGTTCC
TCTGCTGTGTAATCTCCACTGCCCCAGCCGGAGGGGCTCCCTGTCCGACAGATAGAAGATCA
CTTCCACCCCTGGCTTG

17187.1&2

TGGCACACTGCTCTTAAGAACTATGAWGATCTGAGATTTTTTGTGTATGTTTTTGA CTCT
TTTGAGTGCGTAATCATATGTGTCTTTATAGATGTACATACCTCCTTGCACAAATGGAGGGG
AATTCATTTTCATCACTCGGAGTGTCTTAGTGTATAAAAACCATGCTCGTATATGGCTTC
AAGTTGTAAAAATGAAAGTCACTTAAAGAAAAATAGGGGATGGTCCAGGATCTCCACTG
ATAAGACTGTTTTTAAGTAACCTAAGGACCTTGGGTCTACAAGTATATGTGAAAAAAATG
AGACTTACTGGGTGAGGAAATTCATTTGTTTAAAGATGGTGGTGTGTGTGTGTGTGTGTGTG
TG
ACTGKGTAAATATATGTGTGATAATGATTTGCTTGTGTGTGTGTGTGTGTGTGTGTGTGTGTG
AGTWCTARATGCMTCCTCGGKGTG
GTAACCYGCCTTTTTCCCTTG

17191.1&39.1

GGGGGTAGGCTCTTTATACACGGTTATGCTGTACTACAGGCTCAGAGTGCAGTGTAAAGC
AGTGTCAAGAGGCCCCCGCTCAGCCCAAGAATGTGGATTTTCTCTCCCTATTGATCACAGTG
GGTGGGTTTCTTCAGAAAAGCCCCAGAGCCAGGGACCAGTGAGCTCCAAGGTTAGAAGTG
GAACTGGAAGGCTTCAGTCAATGCTGCTTCCACGGCTTCCAGGCTGGGCAGCAAGGAGGA
GATGCCCCATGACGTGCCAGGTGTGCTGATGTGACACCAGTGAAGTCTGGTAGGACAGCAG
CCGCACGCCTGCTCTGCCAGGAGGCCAATCATGGTAGGCAGCATTGCAGGGTCAAGAGGT
CTGAGTCCCGAATAGCAGCAGGGGACGGTCCCTGCGGAGAGGCATTCTGGCCTGAAGAC
AGCTCCATTGAGCCCCCTGCACTACAGGYGTAGTGCCTTGGACCAAGCCCCACAGCCTGGTA
AGGGCGCCTGCCAGGGCCACGGCCACGAGCCA

FIG. 15T

17192.1&2

TAATTTCTTAGTCGTTTGGAAATCCTTAAGCATGCAAAAAGCTTTGAACAGAAGGGTTCACAA
AGGAACCAGGGTTGTCTTATGGCATCCAGTTAAGCCAGAGCTGGGAATGCCTCTGGGTTCAT
CCACATCAGGAGCAGAAGC.ACTTGACTTGTGGTCTCTGCTGCCACGGTTTGGGCGCCACC
ACGCCCACGTCCACCTCGTCTCTCCCTGCCGCCACGTCTGGGCGGCCAAGGTCTCCAAAA
TTGATCTCCAGCTGAGACGTTATATCA.TTTGCTGGCTTCCGGAAAATGATGGTCCATAACCG
AATCTTCAGCATGAGCCTCTTCACTCTTTGATTTATGAAGAACAATCCCTTCTTCCACTGC
CCATCAGCACCTTCATTTGGTTTTTCGGATATTAATTTCTACTTTTGGCCGGTCTTAATTTGA
ATAGCCTTCCACTCATCCAAAGTCATCTCTTTTGGACCCTCTCTTTTACCTCTTCAACTTCA
TTCTCCTTAATTTTCAAGTGTCTGCCACTGGATGATGTTCTTCACTTTCAGGTGTTTCTCAGTC
ACATTTGATTGATCCAAAGTCAGTTAATTCGTCTTTGACAGTTCCCCAGTTGTGAGATCCGCT
ACCTCCACGTTTGTCTCGTCTTCAGGCCAGATCTATCACTTCCACTATGCCTATCAAATTT
CACGTTTGGCACGAGAATCAAATCCATCTCTCGGCCCATTCACGTCACGGCCCCCTCG
ACCTCTTCCAAGACCACCACGACCTCGAATAGGTGGTCAATAATCGGTCTATCAACTGAA
AATTCGCTCTTCACTCTTTTCTTCAAGTGGCTTTTTCGAATCTTCTGTTACGAGGTGGTCTG
CCTTCTGGTCTTCTATCAATTAATTTCCCTTCACTCTGAAGTTGTTGATCAGGTCTTCTTCC
AACTCGTGC

17193

AACCGGATGGACCTGAGTCAGCCGAATCCTAGCCCCCTTCCCTTGGCCCTGCTGTGGTGCTC
GACATCAGTGACAGACCGAAGCAGCAGACCATCAAGCCTACGGGAGGCCCGGGCGCTT
GCGAAGATGAAGTTTGGCTGCTCTCTCTTCCGGCAGCCTTATGCTGGCTTTGTCTTAAATG
GAATCAAGACTGTGGAGACCGCTGCGCTCTCTGCTGAGCAGCCAGCGGA.ACTGTACCA
TCGCCGTCCACATTTGCTCACAGGGACTGGCAAGGCGATGCTGTGGGAGCTGCTGGTGG
AGAGACTCGCGATCACTCTCTCTCAGATTGAGGCCCTTCTCAGGAAAGGGGAAAAGTTTG
GTCGAGGAGTGATAGCCGGGACTCGTTGACATTTGGGGAAACTTTGCAATGCCCGGAAGACT
TAACTCCCGATGAGGTTGTGGAACTAGAAAATCAAGCTGCACTGACCAACCTGAAGCAGA
AGTACCTGACTGTGATTTCAAACCCCGAGGTGCTTACTGGAGCCCCATACCTTGGGAAAGGAG
GCAAGGATGTATTCAGGTAGACATCCAGAGCACCTGATCCCTTTGGGGCATGAAGTGT
GACAAGTGTGGGCTCTGAAAGGAATGTTCCRGAGAAACCAGCTAAATCATGGCACCTTC
AATTTGCCATCGTGACCCAGACCTGTATAAATTAGGTTAAAGATGAATTTCCACTGCTTTG
GAGAGTCCCACCCACTAAGCACTGTGCAATGTAACAGGTTTCTTTGCTCAGATGAAGGAA
GTAGGGGGTGGGGCTTCTCTGTGTGATGCCCTCTTAGCCACACAGGCAATGTCTCAAGTA
CTTTGACCTTAGGGTAGAAGGCAAGCTGCCAGTAAATGTCTCAGCATTTGCTGCTAAATTT
GGTCTCTAGTTTCTCGAATGTACAAATAAATGTGTTGTAGATGA

FIG. 15U

16443.1.edit

TCGAGCGGCGCGCGCGGCGCAGGTGTGCGGAGTCCAGCACGGGAGGCGTGGTCTTGTAGTTGT
TCTCCGGCTGCCCCATTGCTCTCCCACTCCACGGCGATGTCGCTGGGATAGAAGCCTTTGAC
CAGGCAGGTCAGGCTGACCTGGTTCTTGGTCATCTCCTCCCGGGATGGGGGCAGGGTGTAC
ACCTGTGGTTCTCGGGGCTCCCTTTGGCTTTGGAGATGGTTTTCTCGATGGGGGCTGGGA
GGGCTTTGTTGGAGACCTTGCCTTGTACTCCTTGCCATTCAACCAGTCCTGGTGCANGAC
GGTGAGGACGCTNACCACACGGTACGNGCTGGTGTACTGCTCCTCCCGCGGCTTTGTCTTG
GCATTATGCACCTCCACGGCGTCCACGTACCAATTGAACCTTGACCTCAGGGTCTTCGTGGC
TCACGTCCACCACCACGCATGTAACCTCAAANCTCGGNCGCGANACGC

16443.2.edit

AGCGTGGTCGCGGCGCGAGGTCTGAGGTTACATGCGTGGTGGTGGACGTGAGCCACGAAGA
CCCTGAGGTCAAGTTCAACTGGTACGTGGACGGCGTGGAGGTGCATAATGCCAAGACAAA
GCGCGGGAGGAGCAGTACAACAGCACGTACCGTGTGGTCAGCGTCCTCACCGTCCTGCA
CCAGGACTGGCTGAATGGCAAGGAGTACAAGTGCAAGGTCTCCAACAAAGCCCTCCAGC
CCCCATCGAGAAAACCATCTCCAAGGCCAAAGGGCAGCCCCGAGAACCACAGGTGTACAC
CCTGCCCCCATCCCGGGAGGAGATGACCAAGAACCAGGTACGCTGACCTGCCTGGTCAA
AGGCTTCTATCCCAGCGACATCGCCCGTGGAGTGGGAGAGCAATGGGCAGCCGGAGAACA
ACTACAAGACCACGCCTCCCGTGGTGGACTCCGACACCTGCCGGGCGGCGCTCGA

16444.2.edit

AGCGTGGTTNCGGCGGAGCTCCCAACCAAGGCTGGANCTGGATGCCATCAAAGTCTTCTG
CAACATGGAGACTGGTGAGACCTGCCGTGTACCCCACTCAGCCCAGTGTGGCCCCAGAAGAA
CTGGTACATCAGCAAGAACCCCAAGGACAAGAGCCATGTCTGGTTCGGCGAGAGCATGAC
CGATGGATTCCAGTTCGAGTATGGCCCGCAGGCTCCGACCCTGCCGATGTGGACCTGCCC
GGGCGGNCCTCGA

16445.1.edit

AGCGTGGTCGCGGCGCGAGGTCAAGAACCCCCCGGCACCTGCCGTGACCTCAAGATGTGC
CACTCTGACTGGAAGAGTGGAGACTGGATTGACCCCAACCAAGGCTGCAACCTGGAT
GCCATCAAAGTCTTCTCCAACATGGAGACTGGTGAGACCTGCCGTGTACCCCACTCAGCCCA
GTGTGGGCCAGAAAGAACTGGTACATCAGCAAGAACCCCAAGGACAAGAGCCATGTCTGGT
TCGGCGAGAGCATGACCGATGGATTCCAGTTCCAGTATGGCGGCCAGGGCTCCGACCCTG
CCGATGTGGACCTGCCCCGGCGCGCGCTCGA

FIG. 15V

16445.2.edit

TCGAGCGGTGCGCCGGGCAGGTCCACATCGGCAGGGTCGGAGCCCTGGCCGCCATACTCG
AACTGGAATCGATCGGNCA TGCTCTCGCCGAACCAGACATGCCTCTTGNCCTTGGGGTTCT
TGCTGATGTACCAGNTCTTCTGGGCCACACTGGGCTGAGTGGGGTACACGCAGGTCTCACC
ANTCTCCATGTTGCANAAGACTTTGATGGCATCCAGGTTGCAGCCTTGTTGGGGTCAATC
CAGTACTCTCCACTCTTCCAGACAGAGTGGCACATCTTGAGGTACGGCAGGTGCGGGCGG
GGTCTTGACCTCGGTGCGGACCACGCT

16446.1.edit

TCGAGCGGCCCGCCGGGCAGGTCTCTCAGAGCGGTAGCTGTTCTTATTGCCCCGGCAGC
CTCCATAGATNAAGTTATTGCANGAGTTCTCTCCACGTCAAAGTACCAGCGTGGGAAGG
ATGCACGGCAAGGCCCAGTGACTGCGTTGGCGGTGCAGTATTCTTCATAGTTGAACATATC
GCTGGAGTGGACTTCAGAATCCTGCTTCTGGGAGCACTTGGGACAGAGGAATCCGCTGC
ATTCTGCTGGTGGACCTCGGCCGCGACCACGCT

16446.2.edit

AGCGTGGTGGCGGCCGAGGTCCACCAGGGAATGCAGCGGATTCCTCTGTCCCAAGTGC
TCCCAGAAGGCAGGATTCTGAAGACCACTCCAGCGATATGTTCAACTATGAAGAATACTG
CACCGCCAACGCAGTCACTGGGCCCTTGGCGTGCATCCTTCCCACGCTGGTACTTTGACGTG
GAGAGGAACTCCTGCCAATAACTTCATCTATGGAGGCTGCCGGGGCAATAAGAACAGCTAC
CGCTCTGAGGAGGACCTGCCCGGGCGCGCGCTCGA

16447.1.edit

TCGAGCGGCCCGCCGGGCAGGTCCACATCGGCAGGGTCGGAGCCCTGGCCGCCATACTCG
AACTGGAATCCATCGGTGATGCTCTCGCCGAACCAGACATGCCTCTTGTCCTTGGGGTTCT
TGCTGATGTACCAGTTCTTCTGGGCCACACTGGGCTGAGTGGGGTACACGCAGGTCTCACC
AGTCTCCATGTTGCAGAAGACTTTGATGGCATCCAGGTTGCAGCCTTGTTGGGGTCAATC
CAGTACTCTCCACTCTTCCAGCCAGAAATGCCACATCTTGAGGTACGGCANGTGCGGGCGG
GGTCTTGACCTCGGCCGCGACCACGCT

FIG. 15W

16447.2.edit

AGCGTGGTCCGCGCCGAGGTCAAGAAACCCCGCCCGCACCTGCCGTGACCTCAAGATGTG
CCACTCTGGCTGGAAGAGTGGAGAGTACTGGATTGACCCCAACCAAGGCTGCAACCTGGA
TGCCATCAAAGTCTTCTGCAACATGGAGACTGGTGAGACCTGCCGTGTACCCCACTCAGCCC
AGTGTGGCCCAAGAAGAACTGGTACATCAGCAAGAACCCCAAGGACAAAGAGGCATGTCTGG
CTCGGCGAGAGCATGACCGATGGATTCCAGTTCGAGTATGGCGGCCAGGGCTCCGACCCT
GCCGATGTGGACCTGCCCGGGCGGCCGCTCGA

16449.1.edit

AGCGTGGTCCGCGCCGAGGTCTCTGTCAGAGTGGCACTGGTAGAAGNTCCAGGAACCCCTGA
ACTGTAAGGGTTCTTCATCAGTGCCAAACAGGATGACATGAAATGATGTACTCAGAAGTGTG
CTGNAATGGGGCCCATGANATGGTTGNCCTGAGAGAGAGCTTCTTGTCCTACATTCCGGCGG
GTATGGTCTTGGCCTATGCCTTATGGGGGTGGCCGTTGNGGGCGGTGNGGTCCGCCTAAAA
CCATGTTCTCTCAAAGATCATTTGTTGCCCAACACTGGGTTGCTGACCANAAGTGCCAGGAA
GCTGAATACCATTTCCAGTGTCTATCCAGGGTGGGTGACGAAAGGGGTCTTTTGAAGTGT
GGAAGGAACATCCAAGATCTCTGNTCCATGAAGATTGGGGTGTGGAAGGGTTACCAAGTTG
GGGAAGCTCGCTGTCTTTTCTCTTCCAATCANGGGCTCGCTCTTCTGAATATTCTTCAGGGC
AATGACATAAAATTGTATATTCCGTTCCCGGTTCCAGGCCAG

16450.1.edit

TCGAGCGGCGCGCCCGGGCAGGTCCACCACACCCAAATTCCTTGCTGGTATCATGGCAGCCGC
CACGTGCCAGGATTACCGCCTACATCATCAAGTATGAGAAGCCTGGGTCTCCTCCAGAGA
AGTGGTCCCTCGCCCCCGCCCTGGTGTACAGAGGCTACTATTACTGGCCTGGAACCGGGA
ACCGAATATACAAATTTATGTCAATGCCCTGAAGAATAATCAGAAGAGCGAGCCCTGATTG
GAAGGAAAAAGACAGACGAGGCTTCCCAACTGGTAACCCCTTCCACACCCCAATCTTCATG
GACCAGAGATCTTGGATGTCTCTTCCACAGTTCAAAAAGACCCCTTTCTGTCACCCACCCCTGG
GTATGACACTGGAAATGGTATTCAGCTTCTGGCACTTCTGGTCACCAACCCAGTGTGTTGGG
CAACAAATGATCTTTGANGAACATGNTTTAGCGCGGACCACACCGGCCACAACGGGCCACC
CCCATAAAGGCATAGGCCAAGAACAACCCGNCGAATGTAGGACAAGAAGCTCTNTCTCAN
ACAANCATCTCATGGGCCCCCATTCANGACACTTCTGAGTACATCANTTCATGGCATCCTG
GTGCCACTGATAAAAACCCCTTACAGTTA

16450.2.edit

AGCGTGGTCCGCGCCGAGGTCTCTGTCAGAGTGGCACTGGTAGAAGTTCCAGGAACCCCTGA
ACTGTAAGGGTTCTTCATCAGTGCCAAACAGGATGACATGAAATGATGTACTCAGAAGTGTG
CTGGAATGGGGCCCATGAGATGGTTGCTGAGAGAGAGCTTCTTGTCCTACATTCCGGCGGG
TATGGTCTTGGCCTATGCCTTATGGGGGTGGCCGTTGTGGGCGGTGTGGTCCGCCTAAAAAC
CATGTTCTCTCAAAGATCATTTGTTGCCCAACACTGGGTTGCTGACCAGAAGTGCCAGGAAG
CTGAATACCATTTCCAGTGTCTATCCCAAGGGTGGGTGACGAAAGCGGTCTTTTGAAGTGTG
GAAGGAACATCCAAGATCTCTGGTCCATGAAGATTGGGGTGTGGAAGGGTTACCAAGTTGG
GGAAGCTCGTCTGTCTTTTCTCTTCCAATCANGGGCTCGCTCTTCTGATTATTCTTCAGGGC
AATGACATAAAATTGTATATTCCGNTCCCGGTTNCAGCCAATAATAAACCCTCTGTGACA
CCANGGCGGGCCCGCAAGGANCAT

FIG. 15X

16451.1.edit

AGCGTGGTCGCGGCCGAGGTCCTCACCAGAGGTACCACCTACAACATCATAGTGGAGGCA
CTGAAAGACCAGCAGAGGCATAAGGTTGCGGAAGAGGTTGTTACCGTGGGCAACTCTGTC
AACGAAGGCTTGAACCAACCTACGGATGACTCGTGCTTTGACCCCTACACAGTTTCCCAT
ATGCCGTTGGAGATGAGTGGGAACGAATGTCTGAATCAGGCTTTAAACTGTTGTGCCAGTG
CTTANGCTTTGGAAGTGGTCATTTAGATGTGATTATCTAGATGGTGCCATGACAATGGT
GTGAACTACAAGATTGGAGAGAAGTGGGACCGTCAGGGAGAAAATGGACCTGCCCGGGC
GGCCGCTCGA

16451.2.edit

TCGAGCGGCGCGCGGGCAGGTCCATTTTCTCCCTGACGGTCCCACCTTCTCTCCAATCTTGT
AGTTCACACCAATTGTCATGGCACCATCTAGATGAATCACATCTGAAATGACCACTTCCAAA
GCCTAAGCACTGGCACAACAGTTTAAAGCCTGATTAGACATTCGTTCCCACTCATCTCCA
ACGGCATAATGGGAAACTGTGTAGGGGTCAAAGCACGAGTCATCCGTAGGTTGGTTCAAG
CCTTCGNTGACAGAGTTGCCCACGGTAACAACCTCTTCCCGAACCTTATGCCTCTGCTGGT
CTTTCAGTGCCTCCACTATGATGTTGTAGGTGGTACCTCTGGTGAGGACCTCGGCGCGGAC
CAGCT

16452.1.edit

AGCGTGGCGCGCGCGGAGGTCCATTCCTGGAACGGCATCAACTTGGAAGCCAGTGATCG
TCTCAGCCTTGGTTCTCCAGCTAATGGTGATGGNGGTCTCAGTAGCATCTGTACACGAGC
CCTTCTTGGTGGGCTGACATTCCTCAGAGTGGTGACAACACCCCTGAGCTGGTCTGCTTGT
AAAGTGTCTTAAGA CATAGACACTCACTTCATATTTGGCGNCCACCATAAGTCTGTATA
CAACCACGGAATGACCTGTGAGGAAC

16452.2.edit

TCGAGCGGCGCGCGCGGAGGTCCATCAGACCGGTTCTGAGTACACAGTCAGTGTGGTTGC
CTTGCACGATGATATGGAGAGCCAGCCCTGATTGGAACCCAGTCCACAGCTATTCCTGCA
CCAACCTGACCTGAAGTTCACTCAGGTACACCCACAAGCCTGAGCGCCCAGTGGACACCA
CCCAATGTTAGCTCACTGGATAFCGAGTGGGGTGACCCCCAAGGAGAAGACCGGACCA
ATGAAAGAAATCAACCTTGCTCCTGACAGCTCATCCGTGGTTGTATCAGGACTTATGGCGG
CCACCAAAATATGAAGTGAGTGTCTATGCTCTTAAGGACACTTTGACAAGCAGACCAGCTCA
GGGTGTTGTCACCACTCTGGAGAAATGTACCCCCACCAAGAAGGGCTCGTGTGACAGATGC
TACTGAGACCACCATCACCAATTAGCTGGAGAACCAGACTGAGACCATCACTGGCTTCCA
AGTTGATGCCGTTCAGCCAATGGACCTCGGCGCGGACCAACGCTT

16453.1.edit

AGCGTGGTCCGGCCGAGGTCTGCCCGAACTGCCAGTGTACAGGGAAGATGTACATGTTA
TAGNTCTTCTCGAAGTCCCGGGCCAGCAGCTCCACGGGGTGGTCTCCTGCCTCCAGGCGCT
TCTCATTCTCATGGATCTTCTTACCCGCAGCTTCTGCTTCTCAGTCAGAAGGTTGTTGTCC
TCATCCCTCTCATACAGGGTGACCAGGACGTTCTTGAGCCAGTCCCGCATGCGCAGGGGGA
ATTCCGTCAGCTCAGAGTCCAGGCAAGGGGGGATGTATTGCAAGGCCCGATGTAGTCCA
AGTGGAGCTTGTGGCCCTTCTTGGTGCCCTCCAAGGTGCACTTTGTGGCAAAGAAGTGGCA
GGAAGAGTCTGAAGGTCTTGTGTGTCATTGCTGCACACCTTCTCAAACCTCGCCAATGGGGGCT
GGGCAGACCTGCCCGGGCGGCCGCTCGA

16453.2.edit

TCGAGCGGCCCGCCCGGGCAGGTCTGCCAGCCCCCATTGGCGAGTTTGAGAAGGNGTGCA
GCAATGACAAC.AAGACCTTCGACTCTTCTGCACTTCTTTGCCACAAAGTGCACCCTGGA
GGGCACCAAGAAGGGCCACA.AGCTCCACCTGGACTACATCGGGCCTTGCAAATACATCCC
CCCTTGCCTGGACTCTGAGCTGACCGAATTCCCCCTGCGCATGCGGGACTGGCTCAAGAAC
GTCTGGTCAACCTGTATGAGAGGGATGAGGACAAACAACCTTCTGACTGAGAAGCANAAG
CTGCGGGTGAAGAANATCCATGAGAATGANAAGCGCCTGNAGGCANGAGACCACCCCGT
GGAGCTGCTGGCCCGGGACTTCGAGAAGAACTATAACATGTACATCTTCCCTGTACTG
CAGTTCGGCCAGACCTCGCCCGCGACCACCT

16454.1.edit

AGCGTGGNTGCGGACGACGCCCACAAAGCCATTGTATGTAGTTTTANTTCAGCTGCAAAN
AATACCNCCAGCATCCACCTTACTAACCAGCATATGCAGACA

16454.2.edit

TCGACCGGTCCGCCCGGGCAGGTCTGCCCGGATAGCACCGGGCATATTTTGGAAATGGATGA
GGTCTGGCACCCCTGAGCAGCCAGCCAGCACTTGGTCTTAGTTGAGCAATTTGGCTAGGA
GGATAGTATGCAGCACGGTTCTGAGTCTGTGGGATAGCTGCCATGAAGNAACCTGAAGGA
GGCGCTGGCTGGTANGCGTTGATTACAGGCTCGGAACAGCTCGTACACTTGCCATTCTCT
GCATATACTGGNTAGTGAGGCCAGCCTGGCGCTCTTCTTGGCTGAGCTAAAGCTACATA
CAATGGCTTTGNGGACCTCGCCCGCGACCAGCTT

FIG. 15Z

16455.1.edit

TCGAGCGGCCGCGCCGGGCAGGTCCATTTTCTCCCTGACGGTCCCACTTCTCTCCAATCTTGT
AGTTCACACEATTGTCATGACACCATCTAGATGAATCACATCTGAAATGACCACTTCCAAA
GCCTAAGCACTGGCACAACAGTTTAAAGCCTGATTGAGACATTGTTCCCACTCATCTCCA
ACGGCATAATGGGAACTGTGTAGGGGTCAAAGCACGAGTCATCCGTAGGTTGGTTCAAG
CCTTCGTTGACAGAAGTTGCCCACGGTAACAACCTCTTCCCGAACCTTATGCCTCTGCTGGT
CTTCAAGTGCCTCCACTATGATGTTGTAGGTGGCACCTCTGGTGAGGACCTCGGCCGCGA
CCACGCT

16455.2.edit

AGCGTGGTTTGCGGCCGAGGTCTCACCANAGGTGCCACCTACAACATCATAGTGGAGGC
ACTGAAAGACCAGCAGAGGCATAAGGTTGCGGAAGAGGTTGTTACCGTGGGCAACTCTGT
CAACGAAGGCTTGAACCAACCTACGGATGACTCGTGCTTTGACCCCTACACAGNTTCCCAT
TATGCCGTTGGAGATGAGTGGGAACGAATGTCTGAATCAGGCTTTAAACTGTTGTGCCAGT
GCTTANGCTTTGGAAGTGGTCATTTGAGATGTGATTCTANATGGTGTGATGACAATGG
TGNGAACTACAAGATTGGAGAGAAGTGGNACCGTCAGGGGANAAAATGGACCTGCCCCG
GCGGCNCGCTCGA

16456.1.edit

AGCGTGGTCCGCGCCGAGGTCTGGCTTCTGCTCANGTGATTATCCTGAACCATCCAGGCC
AAATAAGCGCCCGCTATGCCCTGNAATGGATTGCCACACGGCTCACATTGCATGCAAGTT
TGCTGAGCTGAAGGAAAAGATTGATC

16456.2.edit

TCGAGCGGCCGCGCCGGGCAGGTCCAAATTGAAACAAACAGTTCTGAGACCGTTCTTCCACCA
CTGATTAACAGTGGCGNGGGCGGGTATTAGGGATAATATTCAATTAGCCTTCTGAGCTTTCT
GGCAGACTTGGTGACCTTGCCAGCTCCAGCAGCCTTCTGGTCCACTGCTTTGATGACACC
CACCGCAACTGTCTGTCTCATATCACCACAACAGCAAGCGACCCAAAGGTGGATAGTCTGA
GAAGCTCTCAACACACATGGGCTTCCAGGAACCATATCAACAATGGGCAGCATCACAG
ACTTCAAGAATTTAAGGGCCATCTTCCAGCTTTTTACCAGAACGGCGATCAATCTTTTCTT
CAGCTCAGCAAACTTGCAATGCAATGTGAGCCG

FIG. 15AA

16459.1.edit

TCGAGCGGCGCGCCGGGCAAGGTCCAGAGGGCTGTGCTGAAGTTTGCTGCTGCCACTGGAG
CCTTCCAATTGCTGGCCGCTTCACTCCTGGAACCTTCACTAACCAGATCCAGGCAGCCTT
CCGGGAGCCACGGCTTCTTGTGGNTACTGACCCAGGGCTGACCACCAGCCTCTCACGGAG
GCATCTTATGTTAACCTACCTACCATTTGCGCTGTGTAAACACAGATTCTCCTCTGCGCTATGT
GGACATTGCCATCCCATGCAACAACAAGGGAGCTCACTCAGNNGGGTTTGATGTGGTGGA
TGCTGGCTCGGGAAGTTCTGCGCATGCGTGGCACCATTTCCTGTAACACCCATGGGANGN
CATGCTGATCTGGACTTCTACAGAGATCCTGAAGAGATTGAAAAAGAAGAACAGGCTGN
TTGCTGANAAAGCAAGTGACCAACGANGAAAATTCANGGGTGAAANGGACTGCTCCCGCT
CCTGAATTCAGTGTACTCAACCTGANGNTGCAGACTGGTCTTGAAGGNGNACANGGGCC
CTCTGGGCCTATTTAAGCANCTTCGGTCGCGAACACGNT

16459.2.edit

AGCGTGNGTCGCGGCCGAGGTGCTGAATAGGCCACAGAGGGCACCTGTACACCTTCAGACC
AGTCTGCAACCTCAGGCTGAGTAGCAGTGAACCTCAGGAGCGGGAGCAGTCCATTACCCCT
GAAATTCCTCCTTGGNCACTGCCTTCTCAGCAGCAGCCTGCTCTTCTTTTCAATCTCTTCA
GGATCTCTGTAGAAAGTACAGATCAGGCAATGACCTCCCATGGGTGTTACGGGAAATGGTG
CCACGGATGCGCAGAACTTCCCGAGCCAGCATCCACCACATCAAACCCACTGAGTGAGCT
CCCTTGTGTTGATGGGATGGGCAATGTCCACATAGCGCAGAGGAGAATCTGTGTTACAC
AGCGCAATGGTAGGTAGGTTAACATAAGATGCCTCCGCGAGAAGCTGGTGGTCAGCCCTG
GGGTCAAGTAACCACAAAGAAAGCCGTGCTCCCGAAGGCTGCCTGGATCTCGTTAGTGAA
GGNTCCAGGAGTGAAGCGGCCAAACAATTCGAGTGGCTTCAGTGGCAAGCAGCAAACCTCA
GCACAAGCCCTCTGGACCTGCCCCCGCGCCGCTCGA

16460.1.edit

TCGAGCGGCGCGCCGGGCAAGGTCCAATTTCTCCCTGACGCGNCCACTTCTCTCCAATCTTGT
AGTTACACCAATTGTCAATGGCACCATCTAGATGAATCACAATCTGAAATGACCACTTCCAAA
GCCTAAGCACTGGCACAACAGTTTAAAGCCTGATTCAGACATTCGTTCCCACTCATCTCCA
ACGGCATAATGGGAAACTGTGTAGCGGTCAAAGCAGGAGTCAATCCGTAGGTTGGTTCAAG
CCTTCGTTGACAGAGTTCCCCACGGTAACAACCTCTNTCCCCGAACCTTATGCCTCTGCTGG
GCTTTCAGNGCCTCCACTATGATGNTGTACGGGGGCACCTCTGGNGANGACCTCGGCCCCG
GACCACGCT

16460.2.edit

AGCGTGCTCGCGGCCGAGGTCTCACCAGAGGTGCCACCTACAACATCATAGTGGAGGCA
CTGAAAGACCAGCAGAGGCATAAGCCTCGGGAAGAGGTTGTTACCGTGGGCAACTCTGTC
AACCAAGGCTTGAACCAACCTACGGATGACTCGTGCTTTGACCCCTACACAGTTTCCCAAT
ATGCCGTTGGAGATGAGTGGGAACGAATGTCTGAATCAGGCTTTAAACTGTTGTGCCAGTG
CTTANGCTTTTGAAGTGGGTCAATTCAGATGTGATTCATCTAGATGGTGCCATGACAATGG
NGNGAACTACAAGATTGGAGAGAAAGTGGNACCGNCAGCGAGAAAATGGACCTGCCCCGG
CGCCCCCTCGA

FIG. 15BB

16461.1.edit

ACCGTGGTCCGGCCGAGGTCCACATCGGCAGGGTCCGAGCCCTGGCCGCCATACTCGAA
CTGGAATCCATCGGTCACTGCTCTCGCCGAACAGACATGCCTCTTGCTTGGGGTTCTTGC
TGATGTACCAAGTTCTTCTGGGCCACACTGGGCTGAGTGGGGTACACGCAGGTCTCACCAGT
CTCCATGTTGCAGAAGACTTTGATGGCATCCAGGNTGCAACCTTGGTTGGGGTCAATCCAG
TACTCTCCACTCTTCCAGCCAGAGTGGCACATCTTGAGGTACGGCAGGTGCGGNCGGGGG
NTTTGCGGCTGCCCTCTGGNCTTCGGNTGTNCTCNATCTGCTGGCTCA

16461.2.edit

TCGAGCGGCCGCCCGGGCAGGTCTCGCGGTCCGACTGGTGATGCTGGTCCTGTTGGTCCCC
CCGGCCCTCCTGGACCTCCTGGCCCCCTGGTCCTCCCAGCGCTGGTTTCGACTTCAGCTTC
CTGCCCCAGCCACCTCAAGAGAAGGCTCACGATGGTGGCCGCTACTACCGGGCTGATGAT
GCCAATGTGGTTTCGTGACCGTGACCTCGAGGTGGACACCACCTCAAGAGCCTGAGCCAG
CAGATCGAGAACATCCGGAGCCCAGAGGGCAGNCGCAAGAACCCCGCCGACCTGCCGT
GACCTCAAGATGTGCCACTCTGACTGGAAGAGTGGAGAGTACTGGATTGACCCCAACCAA
GCTGCAACCTGGATGCCATCAAAGTCTTCTGCAACATGGAGACTGGTGAGACCTGCGTGTA
CCCCACTCAGCCCAGTGTGGCCCCAAAAGAACTGGTACATCAGCAAGAACCCCAAGGACAA
GAAGCATGTCTGGTTCCGGCGAGAACATGACCGATGGATTCCAGTTCGAGTATGGCGGGCA
GGGCTCCGACCTGCCGATGGGGACCTTGGCCCGCAACACGCT

16463.1.edit

ACCGTGGNNCGCGCCGAGGTATAAAATCCAGNCCATATCCTCCCTCCACACGCTGANAG
ATGAAGCTGTNCAAAGATCTCAGGGTGGANAAAACCAT

16463.2.edit

TCGAGCGGCCGCCCGGGCAGGTCTTCAGACTTGGACTGTGTCACTGCCAGGCTTCCAG
GGCTCCAACCTGCAGACGGCCCTGTTGTGGCACAGTCTCTGTAAATCGCGAAAGCAACCATG
GAAGACCTGGGGGAAAACACCAATGGTTTATCCACCTGAGATCTTTGAACAACCTTCATCT
CTCAGCGTGCGGAGGGAGGCTCTGGAATGATATTTCTACCTCGCCCGCGACCAAGCT

16464.1.edit

CGAGCGGGCGACCGGGCAGGTNCAGACTCCAATCCANANAACCATCAAGCCAGATGTCAG
AAGCTACACCATCACAGGTTTACAACCGGGCAGTACTACAAGANCTACCTGCACACCTTG
AATGACAATGCTCGGAGCTCCCCCTGTGGTCAATCGACGCCTCCACTGCCATTGATGCACCAT
CCAACCTGCGTTTCCTGGCCACCACACCCAAATTCCTTGCTGGTATCATGGCAGCCGCCACG
TGCCAGGATTACCGGTACATCATCNAGTATGANAAGCCTGGGCCTCCTCCCAGAGAAGNG
GTCCCTCGGCCCCCGCCTGNTGTCCANAGGNTACTATTACTGNGCCNGCAACCGGCAACC
GATATCNATTTTGNCATTTGGCCTTCAACAATAATTA

16464.2.edit

AGCGTGGTTTCGCGGGCCGANGTCCTGTGACAGTGGCACTGGTAGAAGTTCCAGGAACCCCTG
AACTGTAAGGGTTCTTCATCAGNGCCAACAGGATGACATGAAATGATGTACTCAGAAGTG
TCCTGGAATGGGGCCCATGAGATGGTTGTCTGAGAGAGAGCTTCTTGNCTGTCTTTTTCC
TTCCAATCAGGGGCTCGCTCTTCTGATTATTGTTCAAGGGCAATGACATAAAATTGTATATTCC
GGTCCCGGNTCCAGGCCAGTAATAGTANCCCTCTGTGACACCAGGGCGGNGCCGAGGGACC
ACTTCTCTGGGAGGAGACCCAGGCTTCTCATACTTGATGATGTAACCGGTAATCCTGGCAC
GTGGCGGCTGCCATGATACCAGCAAGGAATTGGGGTGTGGTGGCCAGGAAACGCAGGTTG
GATGNGCATCAATGGCAGTGGAGGCCCTCGATGACCACAGGGGGAGCTCCGACATTGTG
ATTCAAGGTG

16465.1.edit

AGCGTGGNCGCGGGCCGAGGTGCAGCGCGGCTGTGCCACCTTCTGCTCTCTGCCCCAAGCAT
AAGGAGGGTNCCTGCCCCCAGCAGAACATTAACNTCCCCAGCTCGGGCTCTGCCCCG

16465.2.edit

TCGAGCGGGCGGGCGGGCAGGTTCCTTCTGTAAGTGGNTACTTTATTGGNTGGGAAAG
GGAGAAGCTGTGGTACGGCCAAGAGGGAATACAGAGNCCCGAAAAAGGGGAGGGCAGGT
GGGCTGGAACCAAGCGCAGGGCCAGGCAGAAACTTCTCTCTCACTGCTCAGCCTGGTG
GTGGCTGGAGCTCANAAATTGGCAGTGACACAGGACACCTTCCCACAGCCAATTGGCGCGG
CATTTCTCTGCCCAGGACACTGGCTGTCCACCTGGCACTGGTCCCGACAGAAGCCCCGAGC
TGGGGAAGTTAATGTTACCTGGGGCCAGGAACCTCCTTATCATTTGNGCAGAGAGCAG
AAGGTGGCACAGCCCCGGCTGCACCTCGGCTGGCACCAGCT

16466.2.edit

TCGAGCGGGCGGGCGGGCAGGTCCACCATAAGTCTGTATACAACCACGGATGAGCTGTCA
GGAGCAAGGTTGATTTCTTTCAATGGTCCGGNCTTCTCTTGGGGGNCACCCGCACTGGAT
ATCCAGTGAGCTGAACAATGGGTGGCGTCCACTGGCGGCTCAGGCT

16467.2.edit

TCGAGCGGTTTCGCCCCGGCAGGTCCACCACACCCAATTCTTGCTGGTATCATGGCAGCCG
CCAGGTGCCAGGATTACCGGCTACATCATCAAGTATGAGAAAGCCTGGCTCTCTCTCCAGAG
AAGCGGTCCCTCGGGCCCCGCTGGTGTCAAGAGGCTACTATTACTGGCCTGGAACCGGG
AACCGAATATACAATTTATGTCAATGNCCTGAAGAATAATCANNAANAGCGANCCCCCTGA
TTGGAAGGA

FIG. 15DD

01_16469.edit

AGCGTGGTCGCGGCCGAGGTTGTAC.AAGCT

02_16469.edit

TCGAGCGGNCGCCCGGGCAGGTCTGCCAACACCAAGATTGGCCCCCGCCGCATCCACACA
GTCCGTGTGCGGGGAGGTAAACAAGAAATACCGTGCCCTGAGGTTGGACGTGGGGAAATTC
TCCTGGGGCTCAGAGTGTGTACTCGTAAACAAAGGATCATCGATGTTGTCTACAATGCAT
CTAATAACGAGCTGGTTCGTACCAAGACCCTGGTGAAGAATTGCATGCTGCTCATGCACAG
CACACCGTACCGACAGTGGTACGAGTCCCACTATGCGCTGCCCCCTGGGCCGCAAGAAGGG
AGCCAAGCTGACTCCTGAGGAAGAAGAGATTTTAAACAAAAACGATCTAANAAAAAAA
AAACAAT

03_16470.edir

AGCGTGGTTCGCGCCGAGGTGAAATGGTATTCAGCTTCCTGGCACTTCTGGTCAGCAACCC
AGTGTGGGCAACAATGATCTTTGAGCAACA TGGTTTAGGCGGACCACACCGCCCA
ACGGCCACCCCATAAAGGCATATGGCAAGACCATACCCGCGGAATGTAGGACAAGAAGCT
CTCTCTCAGACAACCATCTCATGGGGCCCATTCAGGACACTTCTGAGTACATCATTCATG
TCATCCTGTTGGCACTGATGAAGAACCCTTACAGTTAGGGTTCTTGGAACTTCTACCACT
GCCACTCTGACAGGACCTGCCCGGGCGCGGCTCGA

04-16470.edir

TCGAGCGGCGCGCCCGGGCAGGTCTCTGTCAGAGTGGCACTGGTAGAAGTTCCAGGAACCCCT
GAACTGTAAGCGTTCTTCATCAGTGCCCAACAGGATGACATGAAATGATGTACTCAGAAGT
GTCTTGGAAATGGGCGCCCATGAGATGGTTGCTGTGAGAGAGAGCTTCTTGTCCTACATTCCGGC
GGGTATGGTCTTGGCCTATGCCCTATGGGGGTGGCCGCTGTGGGCGGTGTGGTCCGCCTAA
AACCATGTTCTCTCAAAGATCAATTTGTTGCCCAACACTGGGTTGCTGACCAGAAAGTGCCAGG
AAGCTGAATACCAATTCACCTCGCCCGCCACCACGCTA

05_16471.editt

TCGAGCGGGCCCGCCGGGCAAGGTCTCCCTTCTTGGCGCCCAGGGGCAGCGCATAGTGGGAC
TCGTACCACTGTGCGGTACGGTGTGCTGTGTGATGACACAGCATGCAATTCTTCACCAGGGTCT
TGGTACGAACCAGCTCGTTATTAGATGCATTGTAGACAACATCGATGATCCTTGTTTTACG
AGTACAACACTCTGAGCCCCAGGAGAAATTCCCACGTCCAACTCAGGGCAGCGTATTTC
TTGTTACCTCCCCGCACACGGACTGTGTGATCGCGCGCGGGCCAAGCTGACTCCTGAGGA
AGAAGAGATTTTAAACAAAAAACGATCTAAAAAAATTCAGAAGAAATATGATGAAAGGA
AAAAGCAATGCCAAAAATCAGCAGTCTCCTGGAGGAGCAGTTCCAGCAGGGCAAGCTTCTTG
CGTGCTATCGCTTCAAGCGCCGGACAGTGTGACCGAGCAGATGGCTATGTGCTAGAGGGCA
AAGAAGTGGAGTTCTATCTTAAAGAAATCAGCGCCGAGAAATGGTGTGCTTCAACTAATC
CAAAGGGGAGTTTCAGACCAGTGCAATCAGCAAAACATGATACTGNTGGCCAAATTTA
TTGGTGACGGCTTGACANTANGANNGGCTGGGTCTTGGCGCTTGGATTGGNACAAGCT
TTGGCAGCCTTTTCTTTGGTTTTCCAAAAACCTTTGNTGAAGANGANACCTNGGGCGGA
CCCCTTAAACCGATTCCACNCCNCGNGCCGTTCTANGNCCCNCTTG

FIG. 15EE

06_16471.edit

AGCGTGGTCGCGGCCGAGGTCTGCTGCTTCAGCGAAGGGTTTCTGGCATAACCAATGATA
AGGCTGCCAAGAGACTGTTCCAATACCAGCACCAGAACCAAGCCACTCCTACTGTTGCAGCAC
CTGCACCAATAAATTTGGCAGCAGTATCAATGTCTCTGCTGATTGCACTGGTCTGAAACTC
CCTTTGGATTAGCTGAGACACACCATTCTGGGGCCCTGATTTTCTAAGATAGAACTCCAAC
TCTTTGCCCTCTAGCACATAGCCATCTGCTCGGTACACTGTCCCGCCCTTGAAGCGATGC
ACGCAAGAAGCTTGCCCTGCTGGAAGTCTCTCCAGGAGACTGCTGATTTTGGCATTCTT
TTTCCTTTCATCATATTTCTTCTGAAATTTTTAGATCGTTTTTTGTTTAAAAATCTCTTCTTCC
TCAGGAGTCAGCTTGCGCCCCCGCCGCATCCACACAGTCCGTGTGCGGGGAGGTAACAAGA
AATACCGTGCCCTGAGGTTGGACGTGGGGAATTTCTCTGGGGCTCAGAGTGGTGTACTCG
TAAAAACAAGGATCATCGATGGTGNCTACAATGCATCTAATAACGAGCTGGGTGGACCCA
AAGAACCTGGNGAANAAATGGATCGNCTCATCGACAGGACACCGTACCCGACAGGGGNA
CGANTCCCACTATGCGCTTGCCCTTGGGCCGCAANAAAGGAAAAGTGGCCGGGCGGCCNT
CGAAAGCCCCAATTNTGGAAAAATCCATCACACTGGGNGGCCNGTCCGAGCATGCATNTAN
AGGGGCCCATTCCTCCCTNANN

07_16472.edit

TCGAGCGGCGCGCGCGGCGAGGTCCCCAACCAGGCTGCAACCTGGATGCCATCAAAGTCT
TCTGCAACATGGAGACTGGTGAGACCTGCGTGTACCCCACTCAGCCCAGTGTGGCCGAGA
AGAACTGGTACATCAGCAAGAACCCCAAGGACAAGAGGCATGTCTGGTTGGCGAGAGCA
TGACCGATGGATTCCAGTTCCAGTATGCGCGCCAGGGCTCCGACCCTGCCGATGTGGACCT
CGGCCGCGACCAACGCT

08_16472.edit

AGCGTGGTCGCGCGCGCGAGGTCCACATCGGCGAGGTGCGAGCCCTGGCCGCCATACTCGAA
CTGGAATCCAATCGGTCTGCTCGCCCAACCAGACATGCCTCTTGTCTTGGGGTCTTGG
TGATGTACCACTTCTTCTGGGCCACACTGGGCTGAGTGGGGTACACGCAGGTCTCACCAGT
CTCCATGTTGCAGAAGACTTGTATGGCATCCAGGTTGCAGCCTTGGTTGGGGACCTGCCCC
GGCGGCCGCTCGA

09_16473.edit

TCGAGCGGCGCGCGCGGCGAGGTCCACACACCCAATTCTTGGTGGTATCATGGCAGCCGC
CACCTGCCAGGATTACCGGCTACATCATCAAGTATGAGAAGCCTGGGTCTCTCTCCAGAGA
AGTGGTCCCTCGGCGCGCGCGGCTGTCACAGAGGCTACTATTACTGGCCTGGAACCGGGA
ACGGAAATATACAAATTTATGTCATTGCCCTGAAGCAATAATCAGAAGAGCGAGCCCTGATTG
GAAGGAAAAAGACAGACGAGCTTCCCCAAGTGGTAACCTTCCACACCCCAATCTTCATG
GACCAGAGATCTTGGATGTTCTTCCACAGTTCAAAAGACCCCTTTCGTCACCCACCCCTGG
GTATGACACTCGAAAATGGTATTACGCTTCTCGGCACTTCTGGTACGCAACCCAGTGTGGG
CAACAAATGATCTTTGAGGAACATGGNTTATGGCGGACCACACCGCCCAACACGGCCACC
CCCATAAAGGCATAGGCCAAGACCATACCCGCGGAATGTAGGACAAGAAGCTNTNTNTCAN
ACACCATNTNATGGGCCCCCATTCAGGACACTTCTGAGTACATCAATTTATGNCATCTGTGG
CACTTGATGAAAACCCCTTACAGTTCAAGGTTCTGGAATTTTACCAGCCCTNTTACAGGAC
TNGCCCGGACNCCTTAAGCCNATTNACCCCTCGGGCGTTCTANGGTCCCACTCGNNCACTG
GNGAAAATGGCTACTGTN

FIG. 15FF

14_16475.edit

AGCGTGGTCCGCGGCCGAGGTGTTTTATGACGGGCGCGGTGCTGAAGGGCAGGGAACAACACT
TGATGGTGCTACTTTGAACTGCTTTTCTTTTCTCTTTTGCACAAAGAGTCTCATGTCTGA
TATTTAGACATGATGAGCTTTGTGCAAAAGGGGAGCTGGCTACTTCTCTCTCTGCTTCATC
CCACTATTATTTTGGCACAACAGGAAGCTGTTGAAGGAGGATGTTCCCATCTTGCTCAGTC
CTATGCGGATAGAGATGTCTGGAAGCCAGAACCATGCCAAATATGTGTCTGTGACTCAGG
ATCCGTTCTCTGCGATGACATAATATGTGACGATCAAGAATTAGACTGCCCAACCCAGAA
ATTCCATTGGAGAATGTTGTGCAAGTTTGGCCACAGCCTCCAACCTGCTCCTACTCGCCCTCC
TAATGGTCAAGGACCTCAAGGCCCAAGGGAGATCCAGGCCCTCCTGGTATTCTTGGGAG
AAATGGTGACCTGGTATTCCAGGACAACCAGGGTCCCCTGGTTCCTGGCCCCCTGGA
ATCNGGNGAATCATGCCCTACTGGTCTCAAACCTATTCTCCANATGATTATGATGTC
AAGTCTGGGATAGCNAGTANGGANGGACTCGCAGGCTATTCTGGACCANACCTGCCGGGG
GGCGTTGCAAAGCCCGAATCTGCANANNTNCTTACACTGGCGGGCGTTCGAGCTGCTTT
AAAAGGGCCATTCCNCTTTAGNGNGGGGGANTACAATTACTNGCGGGCGTTTTANANCG
CGNGNCTGGGAAAT

15_16476.edit

AGCGTGGTCCGCGGCCGAGGTCCACATCGGCAGGGTCCGAGCCCTGGCCGCCATACTCGAA
CTGGAATCCATCGGTGCTGCTCTGCGCGAACCAGACATGCCCTCTTGTCTTGGGGTTCTTGC
TGATGTACCAGTTCTTCTGGGCCACACTGGGCTGAGTGGGGTACACGCAGGTCTCACCACT
CTCCATGTTGCAGAAGACTTTGATGCCATCCAGGTTCAGCCTTGGTTGGGGTCAATCCAG
TACTCTCCACTCTTCCAGTCAGACTGCCACATCTTGAGGTACGGCAGGTCCGGCGGGGGT
TCTTGGCGCTGCCCTCTGGGCTCCGGATGTTCTCGATCTGCTGGCTCAGGCTCTTGAGGGTG
GTGTCCACCTCGAGGTACGGGTACGAACCATTTGGCATCATCAGCCCGGTAGTAGCGGC
CACCATCGTGAGCCTTCTCTTGANGTGGCTGGGGCAGGAAGTGAAGTCGAAACCAGCCCT
GGGAGGACCAGGGGGACCAANAGGTCCAGGAAGGGCCCCGGGGGGGACCAACAGGACCAG
CATCACCAAGTGCGACCCGCGAGAACCTGCCCGGCCGNCCTCGTAA

16_16476.edit

TCGAGCGNCGCCCGGGCAGGTCTCGCGCTCGCACTCGTGATGCTGGTCTGTTGGTCCCC
CCGGCCCTCCTGGACCTCCTGGTCCCCCTGGTCTCCACCGCTGGTTTCGACTTCAGCTTC
CTGCCCCAGCCACCTCAAGAGAAGGCTCAGGATGGTGCCCGCTACTACCGGGCTGATGAT
GCCAATGTGGTTCTGTGACCGTGACCTCGAGGTGGACACCACCTCAAGAGCCTGAGCCAG
CAGATCGACAACATCCGGAGCCAGAGGGCAGCCGCAGAAACCCCGCCCGCACCTGCCGT
GACCTCAAGATGTGCCACTCTGACTGGAAGAGTGGAGAGTACTGGATTGACCCCAACCA
GGCTGCAACCTGGATGCCATCAAAGTCTTCTGCAACATGGAGACTGGTGAGACCTGCGTGT
ACCCCACTCAGCCCACTGTGGCCCAAGAACTGTTACATCAGCAAGAACCCCAAGGACA
AGAGGCAATGTCTGTTTGGGGAGAGCAAGACCATGGATTCCAGTTCGAGTATGGCGGCC
AGGGCTCCCACCGTCCCGATGTGACCTCCGGCCCGGACCAACCTT

FIG. 15HH

17_16477.edit

TNGAGCGGCCGCCCCGGGCAGGNTGNNAACGCTGGTCCTGCTGGTCCTCCTGGCAAGGCTG
GTGAAGATGGTCACCCTGGAAAACCCGGACGACCTGGTGAGAGAGGAGTTGTTGGACCAC
AGGGTGCTCGTGGTTTTCCCTGGAACTCCTGGACTTCTGGCTTCAAAGGCATTAGGGGACA
CAATGGTCTGGATGGATTGAAGGGACAGCCCCGGTGCTCCTGGTGTGAAGGGTGAACCTGG
TGCCCCCTGGTGAAAATGGAACTCCAGGTCAAACAGGAGCCCCGTGGGCTTCTGGTGAGAG
AGGACCGTGTGGTGGCCCTGGCCCANACCTCGGCCGCGACCACGCTAAGCCCGAATTTCC
AGCACACTGGNGGCCGTTACTANTCGATCCGAGCTCGGTACCAAGCTTGGCGTAATCATG
GTCATAGCTGTTTTCTGNGTGAAATTGTTATCCGCTCACAATTTACACANCATACGAAGC
CGGAAAGCATAAAGTGTAAGCCTTGGGGTGCTAATGAGTGAGCTAACTCNCAITTAATTT
GCGTTGCGCTCACTGCCCCGCTTTTCCANNNGGGAAACCNNTGGCNTNGCCNGCTTGCNTTAA
NTGAAATCCGCCNACCCCCGGGGAAAAGNCGGTTTGCNGTATTGGGGCNCTTTTCCCTTT
CCTCGGNTTACTTGANTTANTGGGCTTTTGGNCGNTTCGGGTTGNGGCGANCNGGTTCAACN
TCACNCCAAAGGNGGNAANACGGTTTTCCANAATCCGGGGGNTANCCCAANGNAAAAC
ATNNGNCNAANGGCGT

18_16477.edit

AGCGTGGTTNGCGGCCGAGGTCTGGGCCAGGGCCACCAACACGTCCTCTCTCACCAGGAA
GCCCCAGGGCTCCTGTTTGACCTGGAGTCCATTTTACCAGGGGCACCAGGTTACCCCTT
CACACCAGGAGCACCGGGCTGTCCCTTCAATCCATNCAGACCAATTGTGNCCTTAATGCCT
TTGAAGCCAGGAAGTCCAGGAGTTCCAGGGAACACCGAGCACCTGTGGTCCAACAAC
TCCTCTCTCACCAGGTGCTCGGGGTTTCCAGGGTGACCATCTTACCAGCCTTGCCAGGA
GGACCAGCAGGACCAGCGTTACCAACCTGCCCCGGCGGGCGCTCGA

21_16479.edit

TCGAGCGGGCCCGCCCCGAGGTCCAATTTCTCCTGACGGTCCCACCTTCTCTCCAATCTTGT
AGTTACACCAATTGTCAAGCCACCATCTAGATGAATCACATCTGAAATGACCACCTTCCAAA
GCCTAAGCACTGGCACAACAGTTTAAAGCCTGATTCAGACATTCGTTCCCACTCATCTCCA
ACGGCATAAATGGGA.AACTGTGTAGGGGTCAAAGCAGGATCATCCGTAGGTTGGTTCAAG
CCTTCGTTGACAGAGTTGCCCAAGGTAAACAACCTCTTCCCGAACCTTATGCCCTCTGCTGGTC
TTTCAGTGCCCTCCACTATGATGTTGTAGGTGGCACCTCTGGTGAGGACCTCGGCCGCGACC
ACGCT

22_16479.edit

ACCGTGGTCCCGCCCCAGGTCTCACCAGAGGTGCCACCTACAACATCATAGTGGAGGCA
CTGAAAGACCAGCAGAGGCATAAGGTCCGGGAAGAGGTTGTTACCGTGGGCAACTCTGTC
AACGAAGGCTTGAACCAACCTACGGATGACTCGTGCTTTGACCCCTACACAGTTTCCCATT
ATGCCGTTGGAGATGAGTGGGAACGAATGTCTGAATCAGGCTTTAAACTGTTGTGCCAGTG
CTTAGGCTTTGGAAAGTGGTCAATTCAGATGTGATTCATCTAGATGGTGCCATGACAATGG
TGTGA.ACTACAAGATTGGAGAGAAGTGGGACCGTCAGGGAGAAAATGGACCTGCCCGGG
CCGGCCGCTCGA

FIG. 15II

24_16480.edit

TCGAGCGNNCGCCCGGGCAGGTCCAGTAGTGCCCTCGGGACTGGGTTCACCCCCAGGTCTG
CGGCAGTTGTACACAGCGCCAGCCCCGCTGGCCTCCAAAGCATGTGCAGGAGCAAATGGCA
CCGAGATATTCCTTCTGCCACTGTTCTCTACGTGGTATGTCTTCCCATCATCGTAACACGT
TGCTCATGAGGGTCACACTTGAATTCCTCTTTCCGTTCCCAAGACATGTGCAGCTCATTT
GGCTGGCTCTATAGTTTGGGGAAGTTTGTGAAACTGTGCCACTGACCTTTACTTCTCTCT
TCTCTACTGGAGCTTTCTGTACCTTCCACTTCTGTCTTGGTAAAATGGTGGATCTTCTATCA
ATTCATTGACAGTACCCACTTCTCCCAAAACATCCAGGGAATAGTGATTTAGAGCGATT
AGGAGAACCAAATTATGGGGCAGAAATAAGGGGCTTTCCACAGGTTTCTTTGGAGGA
AGATTTAGTGGTGACTTTAAAAGAATACTCAACAGTGTCTTCATCCCCATAGCAAAAGAA
GAAACNGTAAAATGATGGAANGCTTCTGGAGATGCCNNCATTTAAGGGACNCCCAGAACTT
CACCATCTACAGGACCTACTTCAGTTTACANNAAGNCACATANTCTGACTCANAAAGGAC
CCAAGTAGCNCCATGGNCAGCACTTTNAGCCTTTCCCTGGGGAAAANNTTACNTTCTTAA
ANCCTNGGCCNNGACCCCCCTTAAGNCCAAATTTGGGAAAANTTCCNTNCNCTGGGGGGC
NGTTCNACATGCNTTTNAAGGGCCCCAATTNCCCCNT

25_16481.edit

TCGAGCGGCGCCCGGGCAGGTGTCCGAGTCCAGCACGGGAGGCGTGGTCTTGTAGTTGT
TCTCCGGCTGCCCCATTGCTCTCCCACTCCACGGCGATGTGCTGGGATAGAAGCCTTTGAC
CAGGCAGGTACGGCTGACCTGGTCTTGGTCACTCTCCTCCCGGGATGGGGGCAGGGTGTAC
ACCTGTGGTTCTCGGGGCTGCCCTTGGCTTTGGAGATGGTTTCTCGATGGGGGCTGGGA
GGGCTTTGTTGGAGACCTTGCCTTGTACTCTTCCATTACGCCAGTCTGCTGTCAGGAC
GGTGAGGACGCTGACCACACGGGTACGTGCTGTTGTACTGCTCTCCTCCCGGGCTTTGTCTTG
GCATTATGCACCTCCACGGCGTCCACCTACCAAGTTGAACCTGACCTCAGCGTCTTCTGTGGC
TCACGTCCACCACCACCACTGTAACCTCAGACCTCGCCCGGACCAAGCT

26_16481.edit

AGCGTGGTCCGCGCCGAGGTCTGAGTTACATCCGTGGTGGTGGACGTGAGCCACGAAGA
CCCTGAGGTCAAGTTCAACTGCTACGTGGACGGCGTGGAGGTGCATAATGCCAAGACAAA
GCCCCGGGAGGAGCAGTACAACAGCACCTACCGTGTGCTCAGCGTCTCACCGTCTCTGCA
CCAGGACTGGCTGAATGGCAAGCACTACAAGTCCAAGGTCTCCAACAAGCCCTCCCAAC
CCCCATCGAGAAAACCACTCTCAAAAGCCAAAGGGCAAGCCCCGAGAACCACAGGTGTACA
CCCTGCCCCCATCCCGGGAGGAGATGACCAAGAACCAGGTACCCCTGACCTGCCTGGTCA
AAGGCTTCTATCCCAGCGACATCCCGGTGGAGTGGGAGAGCAATGGGCAGCCGGAGAACA
ACTACAAGACCACGCCTCCCGTGTCTGACTCCGACACCTGCCCGGGCGGCGCTCGA

27_16482.edit

TCGAGCGGCGCCCGGGCAGGTGAATGGCTCTCTGCTGACCACCCCGGTGCTGGTGGTGG
GTACAGAGCTCCGATGGGTGAACCAATGACATAGAGACTGTCCCTGTCCAGGGTGTAGG
GGCCAGCTCAGTGATGCCGTGGGTGAGCTGGCTCAGCTTCCAGTACACCCGCTCTCTGTC
CAGTCCAGGGCTTTTGGGGTCAGGACCATGGGTCCAGACAGCATCCACTCTGGTGGCTGC
CCCATCTTCTCAGGCTGAGCAAGGTCACTGTGCAACCAGAGTACAGAGAGCTGACACT
GGTGTCTTGAACAAGGCCATAAGCAGACCTTGAAGGACACCTCGCCCGGACCAAGCT

FIG. 15JJ

23_16482.edit

AGCGTGGTCGCGGCCGAGGTGTCCTTCAGGGTCTGCTTATGCCCTTGTTCAAGAACACCAG
TGTCAGCTCTCTGTACTCTGGTTGCAAGCTGACCTTGCTCAGGCCTGAGAAGGATGGGGCA
GCCACCAGAGTGGATGCTGTCTGCACCCATCGTCTGACCCCAAAAGCCCTGGACTGGACA
GAGAGCGGCTGTACTGGAAGCTGAGCCAGCTGACCCACGGCATCACTGAGCTGGGCCCCCT
ACACCCTGGACAGGGACAGTCTCTATGTCAATGGTTTCACCCATCGGAGCTCTGTACCCAC
CAECAGCACCGGGGTGGTCAGCGAGGAGCCATTCAACCTGCCCCGGCGGCCGCTCGA

29_16483.edit

AGCGTGGTCGCGGCCGAGGTGCTGTCAGAGTGGCACTGGTAGAAGTTCCAGGAACCCTGA
ACTGTAAGGGTTCTTCATCAGTGCCAAAGGATGACATGAAATGATGTACTCAGAAGTGTC
CTGGAATGGGGCCCATGAGATGGTTGTCTGAGAGAGAGCTTCTTGTCCTACATTCGGCGGG
TATGGTCTTGGCCTATGCCCTTATGGGGGTGECCTTGTTGGCGGTGTGGTCCGCCTAAAAC
CATGTTCTCAAAGATCATTTGTTGCCAAACACTGGGTTGCTGACCAGAAGTGCCAGGAAG
CTGAATACCATTTCCAGTGTCATACCCAGGGTGGGTGACGAAAGGGGTCTTTTGAAGTGTG
GAAGGAACATCCAAGATCTCTGGTCCATGAAGATTGGGGTGTGGAAGGGTTACCAAGTTGG
GGAAGCTCGTCTGTCTTTTTCCTTCCAATCAGGGGCTCGCTCTTCTGATTATTCTTCAGGGC
AATGACATAAAATTGTATATTCGGTCCCGGTTCCAGGCCAGTAATAGTAGCCTCTGTGACAC
CAGGGCGGGGCGAGGGACCCCTTCTNTTGAAGAGACCAGCTTCTCATACTTGATGATGA
GNCCGGTAATCCTGGCACGTGGNGGTTCCATGATNCCACCAAGGAAATNGGNGGGGGNG
GACCTGCCCCGGCGGCGGTTCTNAAACCCCAATTCACACACTTGGNGGCGGCTACTATGGATC
CCTCNGTCCAACCTGGNGGAATATGGCATAACTTTT

31_16484.edit

TCGAGCGGGCGCGCGGCCGAGGTGCTTGCACCTTTTCACCAAGTGGGAACGTGTAAATCCGTCT
CCACACACAAGGCCAGGACTCGTTTGTACCGGTTGATGATAGAATGGGGTACTGATGCCAA
CAGTTGGGTAGCCAATCTGGACACACACTGCCAACATTGCGGACACCCTCCAGGAAGC
GAGAATGCAGAGTTTCTCTGTGATATCAAGCACTTCAGGGTTGTAGATGCTGCCATTGTC
GAACACCTGCTGGATGACCAAGCCCAAGGAGAAGGGGGAGATGTTGAGCATGTTACGAG
CGTGGCTTCCTGGCTCCCACTTTGTCTCCAGTCTTGATCAGACCTCGGCCCGCACCACGCT

37_16487.edit

AGCGTGGTCGCGGCCGAGGTGCTGCTTACAGTCTCAGGACTCTACTCCCTCAGCAGCGTG
GTGACCGTGGCCTCCAGCAACTTCGGCACCCAGACCTACACCTGCAACGTAGATCACAAGC
CCAGCAACACCAAGGTGGACAAAGAGACTTGAGCCCAAAATCTTGTGACAAAACCTCACACAT
GCCCCCGTGGCAGCACCTGAACCTCTGGGGGGACCGTCAGTCTTCTCTTCCCCCGCAT
CCCCCTTCCAACCTGCCCGGGCGGCCGCTCG

FIG. 15KK

38_16487.edit

CGAGCGGCGCCCGGGCAGGTTTGGAAAGGGGGATGCGGGGGAAGAGGAAGACTGACGGT
CCCCCAGGAATTTCAGGTGCTGGGCACGGTGGGCATGTGTGAGTTTGTACAAGATTGG
GCTCAACTCTCTTGTCCACCTTGGTGTGCTGGGCTTGTGATCTACGTTGCAGGTGTAGGTC
TGGGTGCCGAAGTTGCTGGAGGGCACGGTCACACGCTGCTGAGGGAGTAGAGTCCTGAG
GACTGTAGGACAGACCTCGGCCGCGACCACGCT

39_16488.edit

NGGNNGGTCCGGNCNGNCAGGACCACTCNTCTTCGAAATA

41_16489.edit

AGCGTGGTCCGGCCGAGGTCTCTACTTGCTCTGCAAAGCACCGATAGCTGCGCTCTGG
AAGCGCAGATCTGTTTTAAAGTCCTGAGCAATTTCTCGCACAGACGCTGGAAGGGAAGTT
TGCGAATCAGAAGTTTCAGTGGACTTCTGATAACGTCTAATTTACGGAGCGCCACAGTACC
AGGACCTGCCCGGGCGGCCCTCGA

42_16489.edit

TCGAGCGCGCCCGCCCGGGCAGGTCTCTGCTACTGNGCGGCTCCGTGAAATTAGACGTTATCA
GAAGTCCACTGAACTTCTGATTCCGAAACTTCCCTTCCAGCGTCTGGTGCGAGAAATTGCT
CAGGACTTTAAACAGATCTGCCCTTCCAGAGCGCAGCTATCGGTGCTTTGCAGGAGGCA
AGTGAGGACCTCGGCCCGCGACCACCT

45_16491.edit

TCGAGCGCGCCCGCCCGGGCAGGTCCACATCGGCAGGGTCCGAGCCCTGCGCGCCATACTCG
AACTGGAATCCATCGGTCACTCTCTCGCCGAACCAGACATGCCTCTTGTCTTGGGGTCT
TGCTGATGTACCACTTCTTCTCGGCCACACTGGGCTGAGTGGGGTACACGCAGGTCTCACC
AGTCTCCATGTTGCAGAAGACTTTCATGGCATCCAGGTTGCAGCCTTGCTTGGGGTCAATC
CAGTACTCTCCACTCTTCCAGTCAGAGTGGCACATCTTGAGGTACGGCAGGTGCGGGCGG
GGTCTTGACCTCGGCCCGCGACCACCT

FIG. 15LL

46_16491.edit

GTGGGNTTGAACCCNTTTNANCTCCGCTTGGTACCGAGCTCGGATCCACTAGTAACGGCCG
CCAGTGTGCTGGAATTCGGCTTAGCGTGGTCGCGGCCGAGGTCAAGAACCCCGCCCGCAC
CTGCCGTGACCTCAAGATGTGCCACTCTGACTGGAAGAGTGGAGAGTACTGGATTGACCC
CAACCAAGGCTGCAACCTGGATGCCATCAAAGTCTTCTGCAACATGGAGACTGGTGAGAC
CTGCGTGTACCCCACTCAGCCCAAGTGTGGCCCAAGAAGTGGTACATCAGCAAGAACCC
CAAGGACAAGAGGCATGTCTGTTCTGGCGAGAGCATGACCGATGGATTCCAGTTCGAGTA
TGGCGGCCAGGGCTCCGACCCCTGCCGATGTGGACCTGCCCGGGCGGCCGCTCGA

47_16492.edit

AGCGTGGTCGCGGCCGAGGTCTGGGATGCTCCTGCTGTACAGTGAGATATTACAGGATC
ACTTACGGAGAAACAGGAGGAATAGCCCTGTCCAGGAGTTCAGTGTGCTGGGAGCAAG
TCTACAGCTACCATCAGCGGCCCTTAAACCTGGAGTTGATTATACCATCACTGTGTATGCTG
TCACTGGCCGTGGAGACAGCCCCGC.AAGCAGCAAGCCAATTTCCATTAAATTACCGAACAG
AAATTGACAAACCATCCCAGATGCAAGTGACCGATGTTTCAAGGACAACAGCATTAGTGTC
AGTGGCTGCCTTCAAGTTCCTCTGTTACTGGTTACAGAGTAACCACTCCCAAAAATGG
ACCAGGACCAACAAAACTAAAAGTGCAGGTCCAGATCAAAACAGAAATGACTATTGAAG
GCTTGCAGCCCACAGTGGAGTATGTGGTTAAGTGTCTATGCTCAGAATCCAAGCGGAGAG
AAGTCAGCCTCTGTTTCACTGNAAGTAACCAACATTGATCGCCTAAAGGACTGGCATT
ACTGATGNGGATGCCGATTCATCAAAATGNTTGGGAAAACCCACAGGGGCAAGTTTNC
ANGTCNAGGNGGACCTACTGAGCCTGAGGATGGAATCCTTGACTNTTCTTNNCTGAT
GGGGAAAAAAACCTTNAAAACTTGAAGGACCTGCCCGGGCGCGCGTNC.AAAACCCAATT
CCACCCCTTGGGGCGCTTCTATGGGNCCTACTCGGACCAAACTTGGCGT.AAN

48_16492.edit

TCGAGCGGGCGCGCGCGCGGAGGTCTTGCAGGTCTGCAAGTGTCTTCTTCAACCATCAGGTGCA
GGGAATACCTCATGGATTCCAATCTCAGCGCTCGAGTAGGTCAACCTGTACCTGGAAACTT
GCCCCTGTGGGCTTTCCCAAGCAATTTGATGGAAATCGGCATCCACATCAGTGAATGCCAG
TCCTTTAGGGCGATCAATGTTGCTTACTGCACTGTGAACCAAGGCTGACTCTCTCCGCTT
GGATTCTGAGCATAGACACTAACCAATACTCCACTGTGGGCTGCAAGCCTTCAATAGTCA
TTTCTGTTTGATCTGGACCTCCAGTTTACTTTTGTGGTCTCTGCTCAATTTTGGGAGTG
GTGGTACTCTGTAAACAGTAACAGGGGAACTTGAAGGCAGGCCTTGACACTAATGCTGT
TGTCTGAACATCCGTCACTTGCATCTGGGATGTTTGTCAAATTTCTGTTCCGTAATTAATG
GAAATTCGCTTGTCTTCCGGGCTTGTCTCCACGGCCAGTGACAGCATACACAGTGATG
GTATAATCAACTCCAGGTTTAAAGCCGCTGATGGTAGCTGAAACTTTGCTCCAGGCACAAGT
GAACTCTGACAGGGCTATTTCTTCTGTTCTCCGTAAGTGAATCTGTAATATCTCACTGGG
ACAGCAGGANGCATTCCAAAACTTCCGGCGNAGCCCTAAGCCGAAATNTGCAATATNC
ATCACTGCGCGGCGCTGANCATTAATAAAGGCCCAATNCCCTATAGGGAGTNT
ANTACAATTNG

FIG. 15MM

49_16493.edit

TCGAGCGGCGCCCGGGCAGGTC.ACTTTTGGTTTTTGGTCATGTTCCGTTGGTCAAAGATA
AAAACCTAAGTTTGAGAGATGAATGCAAAGGAAAAAATATTTCCAAAGTCCATGTGAAA
TTGTCTCCCATTTTTTGGCTTTTGAGGGGGTTCAGTTTGGGTTGCTTGTCTGTTTCCGGGT
GGGGGAAAGTTGGTTGGGTGGGAGGGAGCCAGGTTGGGATGGAGGGAGTTTACAGGAA
GCAGACAGGGCCAACGTCC

55_16496.edit

AGCGTGGTCCGCGCCGAGGTCCTCACCAGAGGTGCCACCTACAACATCATAGTGGAGGCA
CTGAAAGACCAGCAGAGGCATAAGGTTTCGGGAAGAGGTTGTTACCGTGGGCAACTCTGTC
AACGAAGGCTTGAACCAACCTACGGA TGACTCGTGCTTTGACCCCTACACAGTTTCCCATT
ATGCCGTTGGAGATGAGTGGGAACGAATGTCTGAATCAGGCTTTAACTGTTGTGCCAGTG
CTTAGGCTTTGGAAGTGGTCATTTAGATGTGATTCATCTAGATGGTGCCATGACAATGGT
GTGAACCTACAAGATTGGAGAGAAGTGGGACCGTCAGGGAGAAAATGGACCTGCCCGGGC
GGCCGCTCGA

56_16496.edit

TCGAGCGGCGCCCGGGCAGGTC.ATTTTCTCCCTGACGGTCCCACTTCTCTCCAATCTTGT
AGTTCACACCAATTGTCA.TGGCACCATCTAGATGAATCACAATCTGAAATGACCACTTCCAAA
GCCTAAGCACTGGCACAACAGTTTAAAGCCTGATTCAGACATTCGTTCCCACTCATCTCCA
ACGGCATAATGGGAACTGTGTACGGGTCAAAGCAGGAGTCATCCGTAGGTTGGTTCAAG
CCTTCGTTGACAGAGTTGGCCACCGTAACAACCTCTTCCCGAACCTTATCCCTCTGCTGGTC
TTTCAGTGCCTCCACTATGATGTTGTACCTGGCACCTCTGGTGAGGACCTCGGCGCGGACC
ACGCT

59_16498.edit

TCGAGCGGCGCCCGGGCAGGTCACCATAACTCCTGATACAACCACGGATGAGCTGTCA
GGAGCAAGGTTGATTTCTTTCA.TTGGTCCGCTCTTCTCCTTGGGGGTCACCCGCACTCGATA
TCCAGTGAGCTGAACATTTGGTGGTGTCCACTGGCGGCTCAGGCTTGTGGGTGTGACCTGA
GTGAACCTCAGGTCAGTTGGTGCAGGAATAGTGGTTACTGCAGTCTGAACCAGAGGCTGA
CTCTCTCCGCTTGGATTCTGAGCATAGACACTAACCACATACTCCACTGTGGGCTGCAAGC
CTTCAATAGTCATTTCTGTTTGA.TCTGGACCTGCAGTTTATGTTTTGTTGGTCTCTGGTCCAT
TTTTGGGAGTGGTGGTTACTCTGTAACCAAGTAACAGGGGAACCTGAAGGCAGCCACTTGAC
ACTAATGCTGTTGTCTGAACATCGGTCACCTTGCATCTGGGATCGTTTGNCAATTTCTGTTC
GGTAATTAATCGAAATTTGGCTTGCTGCTTGGGGGCTGTCTCCACGGCCAGTGACAGCATA
CACAGNGATGGNATNATCAACTCCAAGTTTAACGCCCTCATGGTAACCTTTAACTTTGCTCC
CAGCCAGNGA.AACTTCCGGACACGGTA.TTCTTCTGGTTTTCCGAAAGNGANCCTGGAATN
TCTCCTTGGANCAGAAAGGANCNTCCAAA.ACTTGGCCCGGAACCCCTT

FIG. 15.NV

60_16473.edit

AGCGTGGTCCGGGCGGAGGTCTGT.CAGAGTGGCACTGGT.AGAAGTTCCAGGAACCCTGA
ACTGTAAGGGTTCTTCATCAGTGCCAAC.AGGATGACATGAAATGATGTAAGTGTGTC
CTGGAATGGGGCCCATGAGATGGTTGTCTGAGAGAGAGCTTCTTGTCTACATTCCGGCGGG
TATGGTCTTGGCCTATGCCCTTATGGGGCTGGGGCTTGTGGGCGGTGTGGTCCGCCTAAAC
CATGTTCTCAAAGATC.ATTTGTTGCCCAACACTGGGTTGCTGACCAGAAGTGCCAGGAAG
CTGAATACCATTTCCAGTGT.CATACCCAGGGTGGGTGACGAAAGGGGTCTTTTGAAGTGTG
GAAGGAACATCCAAGATCTCTGGTCCATGAAGATTGGGGTGTGGAAGGGTTACCAAGTTGG
GGAAGCTCGTCTGTCTTTTTCTTCCAATC.AGGGGCTCGCTCTTCTGATTATTCTTCAGGGC
AATGACATAAAATTGTATATTCCGTTCCCGGTTCCAGGCCAGTAATAGTAGCCTCTTGTGAC
ACCAAGCGGGGGCCANGGACCACTTCTCTGGGANGAGACCCAGCTTCTCATACTTGATGAT
GTAACCCGGTAATCTGCG.CAGTGGCGGCTGNCATGATACCANCAAGGAATTGGGTGNGGN
GGACCTGCCCGGCGGCCCTCNA

60_16498.edit

AGCGTGGTCCGGGCGGAGGTCTGGGATGCTCCTGCTGT.CACAGTGAAGATATTACAGGATC
ACTTACGGAGAAAC.AGGAGGAAATAGCCCTGTCCAGGAGTTCACTGTGCCTGGGAGCAAG
TCTACAGCTACCATCAGCGGCCCTT.AAACCTGGAGTTGATTATACCATC.ACTGTGTATGCTG
TCACTGGCCGTGGAGAC.AGCCCCCGCAAGCAGCAAGCCAATTTCCATTAAATTACCGAACAG
AAATTGACAAACCATCCCAGATGCAAGTGACCGATGTT.CAGGACAACAGCAATTAGTGTC.A
AGTGGCTGCCTTCAAGTTCCCGTGTACTGGTTACAGAGTA.ACC.ACCACTCCC.AAAATGG
ACCAGGACCAACAA.AAACTAA.AACTGCAGGTCCAGATC.AAACAGAAATGACTATTGAAG
GCTTGCAGCCCACAGTGGAGTATGTGCTTAGTGTCTATGCTCAGAAATCCA.AGCGGAGAGA
GTCAGCCTCTGCTT.CAGACTGCAGTA.ACCACTATTCCTGCACCA.ACTGACCTGAAGTTAC
TCAGGT.CACACCCACA.AGCTTGAGCGCGCCAGTGGACACCACCCAATGTTCACTCACTGGAT
ATCGAGTGGGGTGACCCCAAGGAGAAAGACCCCGACCCATGAAAGAAATCAACCTTGCT
CCTGACAGCTCATCCCGCGGTGTATCAGGACTTATGGGGGACTGCCCCCGCGNGGCCGNTC
GAAANCGAATTNTGAAATTCCTTNC.ACTGGGNGGCCNTTCGAGCTTNCCTNTANANGGC
CCAATTNCCTNTAGNCGGTCTN

61_15499.edit

AGCGTGGTCCGGGCGGAGGTCTNAGGA

62_16483.edit

TCGAGCGCGCGCGCGCGGAGGTCCACCCACACCCAAATTCCTTGCTGGTATCATGGCAGCCGC
CACGTGCCAGGATTACCGGCTACATCATCAAGTATGAGAAGCCTGGGTCTCCTCCCAGAGA
AGTGGTCCCTCGGCCCCCGCTGGTGT.CACAGAGGCTACTATTACTGGCCTGGAACCGGA
ACCGAATATACAATTTATGTCA.TGCCCTGAAGAATAATCAGAAGAGCGAGCCCCCTGATTG
GAAGG.AAAACACAGAGGAGCTTCCCAACTGGTAACCTTCCACACCCCAATCTTCATG
GACCAGAGATCTTGGATGTTCTTCCACAGTTCAAAAGACCCCTTTCGT.CACCCACCCCTGG
GTATGACACTGGAAATGGTA.TCAGCTTCTGGCACTTCTGGTCAGCAACCCAGTGTGGG
CAACAAATGATCTTTGAGCAACATGGTTT.AGGCGGACCACACCGCCCAACACGGGCAAC
CCCATAAAGNATAGGCCAAGACCATACCCCGCGGAATGTAGGACAAG.AAGCTCTNTCTCA
ACAACCATCTCATGGGCCCCAATCCAGGACACTTCTGAGTACATCATTTATGTATCTCTG
GTGGGCACTTGATGAANAACCTTACAGTT.CAGGGTTCTGGAACCTTCT.ACCAGNGCCACT
TCTGACAGGANCTTGGGCGNGACCACT

FIG. 1500

63_16500.edit

AGCGTGGTTCGGGCGGAGGTCCATTTTCTCCCTGACGGTCCCACTTCTCTCCAATCTTGTA
TTCACACCATGTGTCATGGCACCATCTAGATGAATCACATCTGAAATGACCACTTCCAAAGC
CTAAGCACTGGCACAACAGTTTAAAGCCTGATTGAGACATTCGTTCCCACTCATCTCCAAC
GGCATAATGGGAAACTGTGTAGGGGTCAAAGCACGAGTCATCCGTAGGTTGGTTCAAGCC
TTCGTTGACAGAGTTGCCCACGGTAACAACTCTTCCCGAACCTTATGCCTCTGCTGGTCTT
TCAGTGCCCTCCACTATGATGTTGTAGGTGGCACCTCTGGTGAGGACCTGCCCCGGGCGGCC
GCTCGA

64_16493.edit

AGCGTGGTTCGGGCGGAGGTGTGCCCCAGACCAGGAATTCGGCTTCGACGTTGGCCCTGTC
TGCTTCCTGTAAACTCCCTCCATCCCAACCTGGCTCCCTCCCAACCAACTTTCCCCC
AACCCGGAACAGACAAGCAACCCAACTGAACCCCTCAAAAGCCAAAAAATGGGAG
ACAATTTACATGGACTTTGGAAAATATTTTTTCTTTGCAATTCATCTCTCAAACTTAGTT
TTTATCTTTGACCAACCGAACATGACCAAAAAACCAAAAAGTGACCTGCCCCGGGCGGCCGCTC
GA

64_16500.edit

TCGAGCGGCGGCGGCGGAGGTCTCACCAGAGGTGCCACCTACAACATCATAGTGGAGG
CACTGAAAGACCAGCAGAGGCATAAGGTTTCGGGAAGAGGTTGTTACCGTGGGCAACTCTG
TCAACGAAGGCTTGAACCAACCTACCGATGACTCGTGCTTTGACCCCTACACAGTTTCCCA
TTATGCCGTTGGAGATGAGTGGGAACGAATGTCTGAATCAGGCTTTAACTGTTGTGCCAG
TGCTTAGGCTTTGGAAGTGGTCATTTGAGATGTGATTCATCTAGATGGTGCCATGACAATG
GTGTGAACCTACAAGATTGGAGACAAGTGGGACCGTCAGGCAGAAAATGGACCTCGGCGG
CGACCACCT

FIG. 15PP

16501.edit

TCGAGCGGGCCCGGGGAGGTACCGGGGTGGTCAGCGAGGAGCCATTCACACTGAACTT
CACCATCAACAACTGCGGTATGAGGAGAACATGCAGCACCTGGCTCCAGGAAGTTCAA
CACCACGGAGAGGGTCCTTCAGGGCCTGCTCAGGTCCCTGTTCAAGAGCACCAAGTGTGGC
CCTCTGTACTCTGGCTGCAGACTGACTTTGCTCAGACCTGAGAAAACATGGGGCAGCCACTG
GAGTGGACGCCATCTGCACCCTCCGCCCTTGATCCCCTGGTNTGGACTGGACANANAGCG
GCTATACTTGGGAGCTGANCCNAACCTTTGGCGGNGACNCCNCTT

16501.2.edit

GAGGACTGGCTCAGCTCCCAGTATAGCCGCTCTCTGTCCAGTCCAGGACCAGTGGGATCAA
GGCGGAGGGTGCAGATGGCGTCCACTCCAGTGGCTGCCCCATGTTTCTCAAGTCTGAGCAA
AGNCAGTCTGCAGCCAGAGTACAGAGGGCCAACTGGTGTCTTGAACAGGGACCTGAG
CAGGCCCTGAAGGACCCTCTCCGTGGTGTGAACTTCTGGAGCCAGGGTGTGATGTTT
TCCTCATACCGCAGGTTGTTGATGGTGAAGTTCAGTGTGAATGGCTCCTCGCTGACCACCC

16502.1.edit

AGCGTGGTCCGCGGCGGAGGTCCACCACACCCAAATTCCTTGGTGGTATCATGGCAGCCGCCA
CGTGCCAGGATTACCGGCTACATCATCAAGTATGAGAAGCCTGGGTCTCCTCCAGAGAA
GTGGTCCCTCGGCCCCCCCCCTGGTGTGCAGAGCCTACTATTACTGGCCTGGAACCGGGAA
CCGAATATACAATTTATGTCAATGCCCTGAAGAATAATCAGAAGAGCGAGCCCTGATTGG
AAGGAAAAAGACAGACAGCAGCTTCCCCAACTGGTAACCCCTTCCACACCCCAATCTTCATGG
ACCANANANCTTGGATNGTCTTTCACTGGTTNAAAAAACCCCTTTTCGCCCCCCCCACCTTG
GGGATTAACCTTGGGAAANGGGGAATTNACCTTCC

16502.2.edit

TCGACCGGCGGCGGCGGAGGTCTCTGTCAGAGTGGCACTGGTAGAAGTTCCAGGAACCCCT
GAAGTGTAAAGGTTCTTCATCAGTCCCAACAGGATGACATGAAATGATGTACTCAGAAAGT
GTCCTGGAATGGGCCCCATGAGATGGTTGTCTGAGAGAGAGCTTCTTGTCTACATTGGC
GGGTATGGTCTTGGCCTATGCCCTATGGCGGTGGCCGTTGTGGGCGGTGTGGTCCGCCTAA
AACCATGTTCTCAAAGATCAATTTGTTGCCCAACACTGGGTTCTGACCAGAAGTGGCAGG
AAGCTGAATACCAATTTCCAGTGTATACCCAGGGNGGGTGACCAAAGGGGGTCNTTTNGA
CCTGGNGAAAGGAACCAATCCAAAANCTCTGNCCTATG

FIG. 15QQ

16503.1.edit

AGCGTGGNCGCGGCCGAGGTCTGAGGATGTAACTCTTCCCAGGGGAAGGCTGAAGTGCT
GACCATGGTGCTACTGGGTCTTCTGAGTCAGATATGTGACTGATGNGAACTGAAGTAGGT
ACTGTAGATGGTGAAGTCTGGGTGTCCCTAAATGCTGCATCTCCAGAGCCTTCCATCATT
CCGTTTCTTCTTTTGGCTATGGGATGAGACACTGTTGAGTATTCTCTAAAGTCACCACTGAAA
TCTTCTCCAAAGGAAAACCTGTGGA-AAAGCCCCCTTATTCTGCCCCATAATTTGGTTCTCC
TAATCNCTCTGAAATCACTATTTCCCTGGAANGTTTGGGAAAAANNGGGCNACCTGNAN
TGGAANTGGATANAAAGATCCCACCAATTTACCCAACNAGCAGAAAGTGGAANGGTAC
CGAAAAGCTCCAAGTAANAAAAAGGAGGGAAGTAAAGGTCAAGTGGGCACCAGTTTCAA
ACAAAACCTTCCCCAACTATANAACCCA

16503.2.edit

AAGCGGCCGCCCCGGGCAGGNACAGNAGTGCTTGGGACTGGGNTCACCCCCAGGTCTGC
GGCAGTTGTCACAGCGCCAGCCCCGCTGGCCTCCAAAGCATGTGCAGGAGCAAATGGCAC
CGAGATATTCTTCTGCCACTGTTCTCTACGTGGTATGTCTTCCCATCATCGTAACACGTT
GCCTCATGAGGGTCACACTTGAATTCTCTTTTCCGTTCCCAAGACATGTGCAGCTCATTTG
GCTGGCTCTATAGTTTGGGGAAAGTTTGTGAAACTGTGCCACTGACCTTTACTTCTCTCT
CTCTACTGGAGCTTTCCGTACCTTCCACTTCTGCTGNTGGNAAAAAGGGNNGGAACNTCTTA
TCAATTTCAATTGGACAGTANCCCNCTTTCTNCCCAAAACATNCAAGGGAAAAATATTGATTN
CNAGAGCGGATTAAGGAACAACCCNAATTATGGGGGCCAGAAATAAAGGGGGCTTTTCCA
CAGGTNTTTTCT

16504.1.edit

TCGAGCGCGCCGCCCCGGGCAGGTCTGCAGGCTATTGTAAGTGTCTGAGCACATATGAGAT
AACCTGGGCCAAGCTATGATGTTGATACGTTAGGTGTATTAATGCACTTTTGACTGCCA
TCTCAGTGGATGACAGCCTTCTCACTGACAGCAGAGATCTTCTCACTGTGCCAGTGGGCA
GGAGAAAGAGCATGCTGCCACTCGACCTCGCCCCGACCAACGCT

16504.2.edit

AGCGTGGTGGCGGCCGAGGTCCAGTCCAGCATGCTCTTTCTCTGCCCCACTGGCACAGTG
AGGAAGATCTCTGCTGTGAGTGAAGGCTGTCACTCACTGAGATGGCAGTCAAAAAGTGC
ATTTAATACACCTAACGTATCGAACATCATAGCTTGGCCCCAGGTTATCTCATATGTGCTCA
GAACACTTACAATAGCCTCCAGACCTGCCCCGGCGGCCGCTCGA

FIG. 15RR

16505.1.edit

CGAGCGGCGCGCGCGGCGAGGTCCAGACTCCAATCCAGAGAACCACCAAGCCAGATGTCAG
AAGCTACACCATCACAGGTTTACAACCAGGCACTGACTACAAGATCTACCTGTACACCTTG
AATGACAATGCTCGGAGCTCCCCTGTGGTCATCGACGCTCCACTGCCATTGATGCACCAT
CCAACCTGCGTTTCTGGCCACCACACCCAAATTCCTTGCTGGTATCATGGCAGCGGCCACG
TGCCAGGATTACCGGCTACATCATCAAGTATGAGAAGCCTGGGTCTCCTCCCAGAGAAGT
GGTCCCTCGGCCCCCGCCCTGGTGNCACAGAAGCTACTATTACTGGCCTGGAACCGGGAACC
GAATATACAATTTATGTCAATTGCCCTGAAGAATAATCANAAGAGCGAGCCCCCTGATTGGA
AGG

16505.2.edit

AGCGTGGTCGCGGCGCGAGGTCTGTACAGAGTGGCACTGGTAGAAGTTCCAGGAACCCCTGA
ACTGTAAGGGTTCTTCATCAGTGCCAACAGGATGACATGAAATGATGTACTCAGAAGTGTC
CTGGAATGGGGCCCATGAGATGGTTGTCTGAGAGAGAGCTTCTTGTCCTGTCTTTTCTTC
CAATCAGGGGCTCGCTCTTCTGATTATTCTTCAGGGCAATGACATAAATTGTATATTGGTT
CCCGGTTCCAGGCCAGTAATAGTAGCCTCTGTGACACCAGGGCGGGGCGAGGGACCACT
TCTCTGGGAGGAGACCCAGGCTTCTCATCTTGATGATGTANCCGGTAATCCTGGCACCGT
GGCGGCTGCCATGATACCAGCAAGGAATTGGGTGTGGTGGCCAAGAAACGCAGGTTGGAT
GGTGCATCAATGGCAGTGGAGGCTCGATNACCACAGGGGAGCTCCGANCAATTGTCATTC
AAGGTGGACAGGTAGAATCTTGTATCAGGTGCCTGGTTTGTAAACCTG

16506.1.edit

TCGAGCGGCGCGCGCGCGGCGAGGTTCTGACCGGTGACCTCGAGGTGGACACCACCTCAAG
AGCCTGAGCCAGCAGATCGAGAACATCCCGAGCCAGAGGGCAGCCGCAAGAACCCCGC
CCGCACCTGCCGTGACCTCAAGATGTGCACTCTGACTGGAAGAGTGGAGAGTACTGGAT
TGACCCCAACCAAGGCTGCAACCTGCAATCAAAAGTCTTCTGCAACATGGAGACTGGT
GAGACCTCCGTGTACCCCACTCAGCCAGTGTGGCCCAAGAAGAACTGGTACATCAGCAAG
AACCCCAAGGACAAGAAGCAATGTCTGCTCCGCGAAAGCATGACCGATGGATTCCAGTTC
GAGTATGGCGGCCAGGGCTCCGACCTCCGATGTGGACCTCGCCCGCGACCAAGCTAAG
CCCGAAATCCAGCACACTGCGCGCCCTTACTAGTGGCATCCGAGCTTCCGTACCAAGCTTG
CGGTAATCATGGGNCATAGCTGTTCTGNGTGAAAATGCTATTCCGCTTCAAAATTTCCC
AC

16506.2.edit

AGCGTGGTCGCGGCGCGAGGTCCACATGGGCAAGGTCGGAGCCCTGGCCGCCATACTCGAA
CTGGAATCCATCGGTCAATGCTCTGCGGAACCAGACATGCCTCTTGTCCTTGGGGTTCTTGC
TGATGTACCAGTTCTTCTGGGCACTGCGGCTGAGTGGGCTACACGCAGGTCTCACCAGT
CTCCATGTTCCAGAAGACTTGTATGGCATCCAGGTTGCAGCCTTGGTTGGGGTCAATCCAG
TACTCTCCACTCTTCCAGTCAGAGTGGCACATCTTGAGGTACCGGCAGGTGCGGGCGGGT
TCTTGGCGCTGCCCTCTGGGCTCCCGATGTTCTCGATCTGCTGGCTCAAGCTCTTGAAGGT
GCTGTCCACCTCGAGGTACGGTCACGAACCTGCCCCGGCGGGCGCTCGA

FIG. 15SS

16507.1.edit

AGCGTGGTCGCGGCCGAGGTCAAGAACCCCGCCCGCACCTGCCGTGACCTCAAGATGTGC
CACTCTGACTGGAAGAGTGGAGAGTACTGGATTGACCCCAACCAAGGCTGCAACCTGGAT
GCCATCAAAGTCTTCTGCAACATGGAGACTGGTGAGACCTGCCGTGTACCCCACTCAGCCCA
GTGTGGCCCAGAAGAACTGGTACATCAGCAAGAACCCCAAGGACAAGAGGCATGTCTGGT
TCGGCGAGAGCATGACCGATGGATTCCAGTTCGAGTATGGCGGCCAGGGCTCCGACCCTG
CCGATGTGGACCTGCCCGNGCCGNGCCGCTCGAAAAGCCNAATTTCCAGNCACACTTGG
CCGGCCGTTACTACTG

16507.2.edit

TCGAGCGGCCCGCCCGGGCAGGTCCACATCGGCAGGGTCCGAGCCCTGGCCGCCATACTCG
AACTGGAATCCATCGGTCAATGCTCTCGCCGAACCAGACATGCCCTCTTGTCTTGGGGTTCT
TGCTGATGTACCAGTTCTTCTGGGCCACACTGGGCTGAGTGGGGTACACGCAGGTCTCACC
AGTCTCCATGTTGCAGAAAGACTTTGATGGCATCCAGGTTGCAGCCTTGGTTGGGGTCAATC
CAGTACTCTCCACTCTTCCAGTCAGAGTGGCACATCTTGAGGTACACGGCAGGTGCGGGCGG
GGTTCTTGACCTCGGCCGCGACACGCT

16508.1.edit

CGAGCGGCCCGCCCGGGCAGGTCCCCCCCCCTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT
TT

16508.2.edit

AGCGTGGTCGCGGCCGAGGTCTGGCAATCCTTCGACTTCTCTCCAGCCGAGCTTCCCAGAA
CATCACATATCACTGCCAAAAATAGCATTCATACATGGATCAGGCCAGTGGAAATGTAAA
GAAGGCCCTGAAGCTGATGGGGTCAATGAAGGTGAATTCAGGCTGAAGGAAATAGCA
AATTCACCTACACAGTTCTGGACGATGGTTGCACGAAACACACTGGGGAATGGAGCAAAA
CAGTCTTTGAATATCGAACACGCAAGGCTGTGAGACTACCTATTGTAGATATTGCACCCTA
TGACATGGTGGTCCTGATCAAGCAATTTGGTGTGACGTTGGCCCTGTTTGCTTTTTATAAA
CCAACTCTATCTGAAATCCCAACAAAAAAATTAATCCATATGTGNTCCTCTTGTCT
AATCTTGGCAACCAAGTGCAAGTGACCGACAAAAATCCAGTTATTTATTTCCAAAATGTTTG
GAAACAGTATAATTTGACAAAAGAAAAAGGATACTTCTTTTTTTTGGCTGGTCCACCAAA
TACAATTCAAAAGGCTTTTTTGGTTTTATTTTTANCCAATTCCAATTCAAAATGTCTCAA
TGGNGCTTATAATAAAATAAATTTCAACCTTNTTTNTGAT

FIG. 15TT

16509.1.edit

AGCGTGGTTCGCGGCCGAGGTCTGGGATGCTCCTGCTGTACAGTGAGATATTACAGGATC
ACTTACGGAGAAACAGGAGGAAATAGCCCTGTCCAGGAGTTCACTGTGCCTGGGAGCAAG
TCTACAGCTACCATCAGCGGCCCTTAAACCTGGAGTTGATTATACCATCACTGTGTATGCTG
TCACTGGCCCGTGGAGACAGCCCCGCAAGCAGCAAGCCAATTTCCATTAAATTACCGAACAG
AAATTGACAAACCATCCCAGATGCAAGTGACCGATGTTTACAGGACAACAGCATTAGTGTCA
AGTGGCTGCCTTCAAGTTCCCTGTTACTGGTTACAGAAGTAACCACCACTCCCAAAAATG
GACCAGGACCAACAATACTAACTGACAGGTCCAGATCAAACAGAAAATGGACTATTG
AAGGCTTGCAGCCACAGTGGAAGTATGTGGNTAGGNGTCTATGCTCAGAATCCCAAGCC
GGAGAAAGTCAGCCTTCTGGTTTAGACTGCAGTAACCAACATTGATCGCCCTAAAGGACT
GGNCATTCACTTGGATGGTGGATGTCCAATTC

16509.2.edit

TCGAGCGGCCCGCCCGGGCAGGTCTTGCAGCTCTGCAGNGTCTTCTTCACCATCAGGTGCA
GGGAATAGCTCATGGATTCCATCCTCAGGGCTCGAGTAGGTACCCCTGTACCTGGAAACTT
GCCCCGTGTGGCCTTTCCCAAGCAAATTTTGAATCGACATCCACATCAGNGAATGCCAG
TCCTTTAGGGCGATCAATGTTGGTTACTGCACTGTAACCAAGAGGCTGACTCTCTCCGCTT
GGATTCTGAGCATAGACACTAACCACATACTCCACTGTGGGCTGCAAGCCTTCAATAGTCA
TTTCTGTTTGATCTGGACCTCCAGTTTAAAGTTTTTGGTGGTCTGNCCTATTTTGGGAAG
TGGGGGGTTACTCTGTAACCAAGTAACAGGGGAAGTTGAAGGCAGCCACTTGACACTAATG
CTGTTGCTCTGAACATCGGTCAGTTCCATCTGGGGATGGTTTTGACAAATTTCTGGTTCGGCA
AATTAATGGAAAATGGCTTCTGCTTGGCGGGGCTGNCCTCCACGGGCCAGTGACAGCATA
C

16510.1.edit

TCGAGCGGCCCGCCCGGGCAGGTCTTGCAGCTCTGCAGTGTCTTCTTCACCATCAGGTGCA
GGGAATAGCTCATGGATTCCATCCTCAGGGCTCGAGTAGGTACCCCTGTACCTGGAAACTT
GCCCCGTGTGGCCTTTCCCAAGCAAATTTTGAATCGACATCCACATCAGTGAATGCCAG
TCCTTTAGGGCGATCAATGTTGGTTACTGCACTGTAACCAAGAGGCTGACTCTCTCCGCTT
GGATTCTGAGCATAGACACTAACCACATACTCCACTGTGGGCTGCAAGCCTTCAATAGTCA
TTTCTGTTTGATCTGGACCTCCAGTTTAAAGTTTTTGGTGGTCTGNNCCATTTTGGGGAA
GGGGTGGTTACTCTTGTAAACAGTAACAGGGGAAGTTGAAGCAGCCACTTGACACTAATG
CTGGTGGCCTGAACATCGGTCAGTTGCACTCTGGGAAGGTTTGGTCAATTTCTGTTCCGGTAAT
TAATGGGAAAATGGCTTACTGGCTTGGCGGGGCTGTCTCCAGGNCAGTGACAAGCATAAC
ACAGGNGATGGGTATAATCAACTCCAGGTTTAAAGGCCNCTGATGGTA

16510.2.edit

AGCGTGGTTCGCGGCCGAGGTCTGGGATGCTCCTGCTGTACAGTGAGATATTACAGGATC
ACTTACGGAGAAACAGGAGGAAATAGCCCTGTCCAGGAGTTCACTGTGCCTGGGAGCAAG
TCTACAGCTACCATCAGCGGCCCTTAAACCTGGAGTTGATTATACCATCACTGTGTATGCTG
TCACTGGCCCGTGGAGACAGCCCCGCAAGCAGTAAGCCAATTTCCATTAAATTACCGAACAG
AAATTGACAAACCATCCCAGATGCAAGTGACCGATGTTTACAGGACAACAGCATTAGTGTCA
AGTGGCTGCCTTCAAGTTCCCTGTTACTGGTTACAGAGTAACCACCACTCCCAAAAATGG
GACCAGGACCAACAATACTAACTGCANGGTCCAGATCAAACAGAAAATGACTATTG
AAGGCTTGCAGCCACAGTGGAAGTATGTGGTTAGTGTCTATGCTCAGAAATNCCAAGCGG
AGAGAGTCAGCCTCTGGTTCAGACT

FIG. 15U

16511.1.edit

TCGAGCGGGCCCGGGGAGGTCAGCGCTCTCAGGACGTCACCACCATGGCCTGGGCTCT
GCTCCTCCTCAECCTCCTCACTCAGGGGCACAGGGTCCTGGGCCCAGTCTGCCCTGACTCAG
CCTCCCTCCGCGTCCGGGTCTCCTGGACAGTCAGTCACCATCTCCTGCACTGGAACCAGCA
GTGACGTTGGTGCTTATGAAATTTGTCTCCTGGTACCAACAACACCCAGGCAAGGCCCCCAA
ACTCATGATTTCTGAGGTC.ACTAAGCGGGCCCTCAGGGGTCCCTGATCGCTTCTCTGGCTCC
AAGTCTGGC.AACACGGGCTCCCTGACCGTCTCTGGGCTCCANGCTGAGGATGANGCTGATT
ATTACTGGAAGCTC.ATATGCAGGCAACAACAATTGGGTGTTCCGGCGGAAGGGACCAAGCT
GACCGTNCTAAGGTCAAGCCCAAGGCTTGCCCCCTCGGTCACTCTGTTCCCACCCTCCTCT
GAAGAAGCTTTCAAGCC.AACAANGNCACACTGGGTGTGTCTCATAAGTGGACTTCTACCC

16511.2.edit

AGCGTGGTCCGGGCGGAGGTCTGTAGCTTCTGTGGGACTTCCACTGCTCAGGCGTCAGGCT
CAGGTAGCTGCTGGCCGCGTACTTGTGTTGCTTTGNTTGGAGGGTGTGGTGGTCTCCACT
CCCGCTTGACGGGGCTGCTATCTGCCCTCCAGGCCACTGTCACGGCTCCCGGGTAGAAGT
CACTTATGAGACACACCAGTGTGGCCTTGTGGCTTGAAGCTCCTCAGAGGAGGGTGGGA
ACAGAGTGACCGAGGGGGC.AGCCTTGGGCTGACCTAGGACGGTCAGCTTGGTCCCTCCGC
CGAACACCCAATTGTTGTTGCCCTCCATATGAGCTGCAGTAATAATCAGCCTCATCCTCAGC
CTGGAGCCCAGAGACNGTCAAGGGAGGCGCGTGTGTTGCC.AAGACTTGGAAAGCCAGANAAG
CGATCAGGGACCCCTGAGGGCCGCTTTACNGACCTCAAAAAATCATGAATTTGGGGGGCC
TTTGCTGGGNGTTGGTTGGT.NACCAGNAAAAACAAAATTT.CATAAAGCACCAACGTCCT
GCTGGTTTCCAGTGCANGAANA.TGGTGAAGTGAANTGTCC

16512.1.edit

AGCGTGGTCCGGGCGGAGGTCCAGCATCAGGAAGCCCCGCTTGCCGGCTCTGGTCATCGCC
TTTCTTTTTGTGGCCTGAAACGATGTCAATTCAGTACGAGAACTGCCGTCTCCACTG
CTGTCTTATAAGTCTGCAGCTTACAGGCCAATGGCTCCCATATGCCCAAGTTCCTTCATGTCC
ACCAAAGTACCCGTCTC.ACCAATTAACACCCAGGTCTCAGAGTTCTCCTGGGTGTGCTTGG
CCCGAAGGGAGGTAAGTANACGGATGGTCTCTGGTCCCACAGTCTTGGATCAGGGTACGAG
GAATGACCTCTAGGGCCTCGCCNACAAGCCCTGTATGGACCTGCCCCGGGCGGCCCCGCTC
GA

16512.2.edit

TCGAGCGGGCCCGGGGAGGTCCATACAGGGCTGTTGCCAGGGCCCTAGAGGNCATTCC
TTGTACCCTGATCCAGAACTGTGGGACCTAGCACCATCCGTCTACTTACCTCCCTTCGGGGCC
AAGCACACCCAGGAGAACTGTGAGACCTGGGGTGTA.AATGGNGAGACGGGTACTTTGGTG
GACATGAAGGA.ACTGGCCATATGGGACCAATGGCTGNC.AAGCTGCANACTTATAAGACA
GCACTGGAGACGGCAGTTCTGCTACTCCAAATGATC.ACATCGTTT.CAGGCCACAAAAAG
AAAGGCGATGACCANACCGGGCAAGGGCGGGCTTCTGATGCTGGACCTCGGCCGCGGAC
CAGCTT

FIG. 15VV

16514.1.edit

AGCGTGGTCGCGGCCGAGGTCCACTAGAGGTCTGTGTGCCATTGCCAGGCAGAGTCTCTG
CGTTACAAAGTCCTAGGAGGGCTTGCTGTGCGGAGGGGCTGCTATGGTGTGCTGCGGTTCA
TCATGGAGAGTGGGGCCAAAGGCTCCGAGGTTGTGTGTCTGGGAACTCCGAGGACAGA
GGGCTAAATCCATGAAGTTTGTGGATGGCCTGATGATCCACAGCGGAGACCCCTGTTAACTA
CTACGTTGACACTGCTGTGCGCCACGTGTTGCTCANACAGGGTGTGCTGGGCATCAAGGTG
AAGATCATGCTGCCCTGGGACCCANCTGGCAAAAAATGGCCCTTAAAAACCCCTTGCCNTG
ACCACGTGAACCAATTTGTGNGAACCCCAAGATGAANATACTTGCCCACCACCCCCCATTC

16514.2.edit

TCGAGCGGCCGCCCCGGGCAGGTCTGCCAAGGAGACCCCTGTTATGCTGTGGGGAAGTGGCTG
GGGCATGGCAGGCGGCTCTGGCTTCCCACCCCTTCTGTTCTGAGATGGGGGTGGTGGGCAGT
ATCTCATCTTTGGGTTCCACAATGCTCACGTGGTCAGGCAGGGGCTTCTTAGGGCCAATCT
TACCAGTTGGGTCCCAGGGCAGCATGATCTTCACCTTGATGCCACACACCCCTGTCTGAG
CAACACGTGGCGCACAGCAGTGTCAACGTAGTAGTTAACAGGGTCTCCGCTGTGGATCAT
CAGGCCATCCACAAACTTCATGGATTAGCCCTCTGTCTCGGAGTTTCCCAAAACACCCAC
AACCTCGCCAGCCTTTGGGGCCCCACTTCTTCATGAATGAAACCGCAGCACACCAATTANCA
GGCCCTTCCGCACAGGNAAGCCCTTCTTAAGGAGTTTGTAAACGC.AAAAAACTCTTGCCCT
GGGGCAATGGGCACACAGACCTNTANTNGGACCTTGGNCCCGCAACCACCGCTT

16515.1.edit

AGCGTGGTCGCGGCCGAGGTCTGCGCCCTCTGSCAAGGCTCCTGAAGATGGTCACCCCTGG
AAAACCCCGGACCACTGGTGAGAGAGGAGTTGTTGGACCACAGGGTGCTCGTGGTTTCCC
TGGAACTCCTGGACTTCTTGCTTCAAAGCCATTAGCGGACACAA TGGTCTGGATGGATTG
AAGGGACAGCCCCGTCTCTCTGCTGAAGGGTGAACCTCGNGCCCCCTGGTGAAAATGGA
ACTCCAGGTCAAACAGGAGCCCCGNGCCCTTCTGGNGAGACAGGACGTGTTGGTCCCCCT
GGCCCANACCTGCCCCGGGGGGGCTCNAAAAGCCGAAATCCAGNACACTGGCGGGCCGNT
ACTANTGGAATCCGAACCTTGGGTACCAAAGCTTGGCCGTAATCATGGCCATAGCTTGTTC
CTGGGGNGGAAAATGGTATTCGCTNCCAAATTCACACACACATACCGAACCCGGAAAGCA
TTAAAGTGTAAAAGCCCTGGGGGGGCTAAATGANGTGAGCNTAACTCNCATTTAAATGG
CGTTGCGCTTCACTGCCCCGCTTTTCCAGTCCGGGNA

16515.2.edit

TCGATCGGCCGCCCCGGGCAGGTCTGCGCCACGGGCAACACAGTCTCTCTCACCAGGA
AGCCACCGGGCTCTGTTTACCTGGAGTTCCAATTTACCAGGGGCAACAGGTTACCCCT
TCACACAGGAGCACCGGGCTGTCCCTTCAATCCATCCAGACCAATTGTGNCCTTAAATGCC
TTTGAAGCCAGGAAGTCCAGGACTTCCAGGGAACACAGGACCCCTGTGCTCCAACAAC
TCCTCTCTCACCAGGTGCTCCGGTTTCCAGGGTACCATCTTACCAGCCTTGCCAGGA
GGGCCAGACCTCGGGGGGACACCGCT

FIG. 15WW

16516.1.edit

ANCGTGGTCCGGGCGGAGGTCTCACCAGAGGTGNCACCTACAACATCATAGTGGAGGCA
CTGAAAGACCEANCAGAGGCATAAGGTTCCGGGAAGAGG

16516.2.edit

TCGAGCGGCGCGCGGGCAGGTCCATTTTCTCCCTGACGGTCCCACTTCTCTCCAATCTTGT
AGTTCACACCAATTGTATGGCACCATCTAGATGAATCACATCTGAAATGACCACTTCCAAA
GCCTAAGCACTGGCACAACAGTTTAAAGCCTGATTGAGACATTGTTCCCACTCATCTCCA
ACGGCATAATGGGAAACTGTGTAGGGGTCAAAGCAGAGTCATCCGTAGGTGTTGTTCAAG
CCTTCGTTGACAGAGTTGTCCACGGTAACAACCTCTTCCCGAACCTTATGCCTCTGCTGGTC
TTTCAGTGCCTCCACTATGATGTTGTAGGTGGCACCTCTGGTGAGGACCTCNGNCCNGAAC
AACGCTTAAGCCCCGNATTCTGCAGAATAATCCCATCACACTTGGCGGGCGCTTCGANCATG
CATCNTAAAAGGGGCCCCAAATTTCCCCCTTAAGNGAANCCGTATTTNCCAAATTTCACTG
GNCCCCCGNTTTTACAAACGNCGGTGAACTGGGGAAAAACCCTGGCGGTTACCCAACTT
TAATCGCCNTTGGCAGCACAAATCCCCCTTTTCGNCCANCNTGGGCGTAAATAACCGAAAA

16517.1.edit

ANCGNGGTCCGGGCGGANGTNTTTTTCTNTTTTTT

16518.1.edit

AGCGTGGTCCGGGCGGAGGTCTGAGGTTACATGCCGTGGTGGTGGACGTGAGCCACGAAGA
CCCTGAGGTCAAGTTCAACTGGTACGTGGACGGCGTGGAGGTGCATAATGCCAAGACAAA
GCCGCGCGGAGGAGCACTACAAACAGCAGTACCGGCGGTCAGCGTCCTCACCCTCCTGCA
CCAGAATTGCTTGAATGGCAAGGAGTACAAGNGCAAGGTTTCCAAACAAGCCNTCCCAGC
CCCCNTCGAAAAAACCAATTTCCAAAGCCAAAGGGCAGCCCCGAGAACCAAGGTGTACAC
CCTGCCCCCATCCCCGGAGGAAGAAGANCAANAACCCNGGTTACGCCTTAACCTTGGTTC
NAANGCTTTTTATCCCAACGNACTTCCCCNTGGAANTGGGAAAAACCAATGGGCCAANC
CGAAAAACAATTACAANAACCCC

16518.2.edit

TCGAGCGGCGCGCGGGCAGGTGTCCGAGTCCAGCACGGGAGGCGTGGTCTTGTAGTTGT
TCTCCGGCTGCCCCATTGCTCTCCCACTCCACGGCGATGTGGCTGGGATAGAAGCCTTTGAC
CAGGCAGGTGAGGCTGACCTGCTTCTTGGTCACTCTCTCCCGGATGGGGGCAGGTTGAA
CACCTGGGCTTCTCGGGGCTTCCCCCTTGGTTTGAANAATGGTTTTCTCGATGGGGGCTGG
AAGGGCTTTGTTGNAACCTTCCACTTCACTCCTTCCCAATTCACCCAGNCCTGGNCCAGGA
CGGNGAGGACNCTNACCACACGGAACCGGGCTGGTGGACTGCTCC

FIG. 15XX

16519.1.edit

AGCGTGGTCGCGGACGANCTCCTGTCAGAGTGGNACTGGTAGAAGTTCCANGAACCCCTGA
ACTGTAAGGGTTCTTCATCAGTGCCAACAGGATGACATGAAATGATGTACTCAGAAGNGN
CCTGGAATGGGGCCCCATGANATGGTTGCC

16519.2.edit

TCGAGCGGGCCCGGGCAGGTCCACCACACCCAATTCTTGCTGGTATCATGGCAGCCGC
CACGTGCCAGGATTACCGGCTACATCAAGTATGAGAAGCCTGGGTCTCTCCAGAGA
AGTGGTCCCTCGGGCCCGCCCTGGTGTCAAGAGGGCTACTATTACTGGCCTGGAACCGGGA
ACCGAATATACAATTTATGTCAATTGCCCTGAAGAATAATCAGAAGAGCGAGCCCTGATTG
GAAGGAAAAAGACAGACGAGCTTCCCCAACTGGTAACCCTTCCACACCCCAATCTTCATG
GACCAGAGATCTTGGATGTTCTTCCACAGTTCAAAAGACCCCTTTCGGCACCCCCCTGG
GTATGAACCTGGGAAAANGGNANTTAANCTTTCCTGGCA

16520.1.edit

AGCGTGGTCGCGGCGGAGGTCTGGGATGCTCTCTGCTGTACAGTGAGATATTACAGGATC
ACTTACGGAGAAACAGGAGGAAAATAGCCCTGTCCAGGAGTTCAGTGTGCCTGGGAGCAAG
TCTACAGCTACCATCAGCGCCCTTAAACCTGGAGTTGATTATACCATCACTGTGTATGCTG
TCACTGCCCGTGGAGACAGCCCCGCAAGCAGCAAGCCAAATTTCCATTAAATTACCGAACAG
AAATTGACAAACCATCCCAGATGCAAGTGACCGATGTTACAGACAACAGCATTAGTGTC
AGTGGCTGCCTTCAAGGTNCCCTGCTACTCGGTTACAGANTAACCACCCTCCCAAAAATG
GACCAGGAACCACAAAACTTAAACTCCAGGCTCCAGATCAAAAACAGAAATGACTATTGA
ANGCTTGACGCCACACTGGGAGTATGNGGGTAGTGNCTATGCTTCAGAAATCCAAGCGGA
AAAANGTCAAGCCTTNTGGGTTCAA

16520.2.edit

TCGAGCGGGCCCGGGCAGGTCTGCTGCGAGCTCTGCACTGTCTTCTTCAACCATCAGGTGCA
GGGAATAGCTCATGGATTCCATCCTCAGCGCTCGAGTAGCTCACCCCTGTACCTGGAAACTT
GCCCCGTGGGGCTTTCCCAAGCAATTTTGAATGGAATCGACATCCACATCAGTGAATGCCAG
TCCTTTAGGGCGATCAATGTTGGTTACTGCAAGNCTGAACCAGAGGCTGACTCTCTCCGCTT
GGATTCTGAGCATAGACACTAACACATACTCCACTGTGGGCTGCAANCCTTCAATAANNC
ATTTCTGTTTGATCTGGACC

16521.2.edit

TCGAGCGGGCCCGGGCAGGTCTGCTGCGGCTCTGCGACACGCACATGGGGGNGTTGNT
CTNATCCAGCTGCCCCAGCCCCCAATGGGCACTTTGAGAAGGTGTGCAGCAATGACAACAA
NACCTTCAGCTCTTCTGCTGCACTTCTTTGCCACAAAGTGCACCCTGGAGGGCACCAAGAAG
GGCCACAAGCTCCACCTGGACTACATCGGGCCTTGCAAAATACATCCCCCTTGCCTGGACT
CTGAGCTGACCGAATTCCTCCCTTGGGCAATGGGGGACTGGCTCAAGAACCCTCTGCGACCC
TTGTATGANAGGGATGAAGACACNACCC

FIG. 15YY

16522.1.edit

AGCGTGGTTCGCGGCCGAGGTCTGTCCTACAGTCCTCAGGACTCTACTCCCTCAGCAGCGTG
GTGACCGTGCCCTCCAGCAACTTCGGCACCCAGACCTACACCTGCAACGTAGATCACAAGC
CCAGCAACACCAAGGTGGACAAGAGAGTTGAGCCCAAATCTTGTGACAAAATCACAACAT
GCCCCACCGTGCCAGCACCTGAATCCTGGGGGGACCGTCAGTCTTCTCTCCCCCGCAT
CCCCCTTCCAACCTGCCCCGGCGGCCGCTCGAAAGCCGAATTCCAGCACACTGGCGGGCCG
GTAAGTGGANCCNAACTTGGNANCCAACTGGNGGAANTAATGGGCATAANCTGTTTC
TGGGGGGAATTTGGTATCCNGTTTACAATTCCCNACAAACATACGAGCCGGAAGCATAAA
AGNGTAAAAGCCTGGGGGNGGCCCTANTGAAGTGAAGCTAAACTCACATTAATTNGCGTTG
CCGCTCACTGGCCCCGTTTTCCAGC

16522.2.edit

TCGAGCGGCCGCCCCGGGCAGGTTTGAAGGGGGATGCGGGGGAAGAGGAAGACTGACGG
TCCCCCAGGAGTTCAGGTGCTGGGCACGGTGGGCATGTGTGAGTTTTGTACAAAGATTTG
GGCTCAACTCTCTTGTCCACCTTGGTGTGCTGGGCTTGTGATCTACGTTGCAGGTGTAGGT
CTGGGNGCCGAAGTTGCTGGAGGGCACGGTCACACGCTGCTGAGGGAGTAGAGTCCTGA
GGACTGTANGACAGACCTCGGCCGNGACCACGCTAAGCCGAATTCTGCAGATATCCATCA
CACTGGCGGCCGCTCCGAGCATGCATTTTAGAGC

16523.1.edit

AGCGTGGNCGCGGACGANCAACAACCC

16523.2.edit

TCGAGCGGCCGCCCCGGGCAGGNCCACATCGGCAGGGTCCGAGCCCTGGCCGCCATACTCG
AACTGGAATCCATCGGTCAATGCTCTTGGCGAACCAGACATGCCTCTTGTCTTGGGGTTCTT
GCTGATGNACCAGTTCTTCTGGGCCACACTGGGCTGAGTGGGGTACACGCAGGTCTCACCA
GTCTCCATGTTGCAGAAAGACTTTGATGGCATCCAGGTTGCAGCCTTGGTTGGGGTCAATCC
AGTACTCTCCACTCTTCCAGTCAGAGTGGCACATCTTGAGGTACCGGCAGGTGCGGGGGGG
GTTCTTGACCT

16524.1.edit

AGCGTGGTTCGCGGCCGAGGTCCAGCCTGGAGATAANGGTGAAGGTGGTCCCCCGGACTT
CCAGGTATAGCTGGACCTCGTGGTACCCCTGGTGAGAGAGGTGAAACTGGCCCTCCAGGA
CCTGCTGGTTTCCCTGGTCTCTGACACAAATGGTGAACCTGGNGGTAAAGGAGAAAGA
GGGGCTCCGNTGANAAAGGTGAAGGAGCCCTCTGNAATTGGCAGGGGCCCCANGACTT
AGAGGTGGACCTGGCCCCCTGGCCCCGAAGGAGGAAAGGGTCTGCTGGTCTCTCTGGG
CCACCTGG

FIG. 15ZZ

16524.2.edit

TCGAGCGGCCGCCCGGGCAGGTCTGGGCCAGGAGGACCAATAGGACCAGTAGGACCCCTT
GGGCCATCTTTCCCTGGGACACCAACAGCACCTGGACCGCCTGGTTCACCCCTTGTCACCCCTT
TGGACCAGGAATTCCAAGACCTCTCTTCTCCAGGCATTCTTGCAGACCAGGAGTACCA
NCAGCACCAGGTGGCCCAGGAGGACAGCAGCACCCCTTCTCCTTCGGGACCAGGGGGA
CCAGCTCCACCTCTAAGTCCTGGGGCCCTGCCAATCCAGGAGGGCCTCCTTCACCTTTCTC
ACCCGGAGCCCTCTTTCT

16526.1.edit

TCGAGCGGCCCGCCCGGCCAGGTCC.ACCGGGATATTCGGGGGTCTGGCAGGAATGGGAGGC
ATCCAGAACGAGAAGGAGACCATGCA.AAGCCTGAACGACCGCCTGGCCTCTTACCTGGAC
AGAGTGAGGAGCCTGGAGACCGACA.ACCGGAGGTGGAGAGCAAAATCCGGGAGCACTT
GGAGAAGAAGGGACCCCAGGTCA.GAGACTGGAGCCATTACTTCAAGATCATCGAGGACCT
GAGGGCTCANATCTTCGCA.AA.TACTGCNGACAATGCCCG

16526.2.edit

ATGCGNGGTGCGGGCCGANGACCANCTCTGGCTCATACTTGACTCTAAAGNCNTCACCAG
NANTTACGGNCATTGCCAACTGCGAGAACGATGCGGGCAATTGTCCGCANTATTTGCCGAAG
ATCTGAGCCCTCAGGNCCTCGATGATCTTGAAGTAANGGCTCCAGTCTCTGACCTGGGGTC
CCTTCTTCTCCAAGTGCTCCCGGATTCTCTCTCCAGCCTCCGGTTCTCGGTCTCCAAGNCT
TCTC.ACTCTCTCCAGCA.AAAGAGCGCAAGCCGGNCGATCAGGGCTTTTGCATGGACT

16527.1.edir

AGCGTGGTCCCGCCGAGGTTGTACAAGCT.....

16527-2.edic

TCGAGCGGCCCGCCCGGGCAGGTCTGCCAACACCAAGATTGGCCCCCGCCGCATCCACACAG
GTTNGTGTGCGGGGAGGTAACAAAGAAATACCGTGCCTGAGGNTGGACGNGGGGAATTTT
TCCTGGGGCTCAGAGTGTGTACTCGTAAAAACAGGATCATCGATGTTGTCTACAATGCAT
CTAATAACGAGCTGGTTCGTACCAAGACCCCTGGTGAAGAATTGCATCGTGCTCATNGACA
GCACACCGTACCGACAGTGGGTACCGAAGTCCCCTATGCNCT

FIG. 15.44A

16523.1.edit

TCGAGCGGCGCCCGGGCAGGTCCACCACACCCAATTCCTTGCTGGTATCATGGCAGCCGC
CACGTGCCAGGATTACCGGCTACATCATCAAGTATGAGAAGCCTGGGTCTCCTCCCAGAGA
AGTGGTCCCTCGGCCCCCGCCTGGTGTACAGAGGCTACTATTACTGGCCTGGAACCGGGA
ACCGAATATACAATTTATGTCAATTGCCCTGAAG

16523.2.edit

AGCGTGNTCNCGGCCGAGGATGGGGAAGCTCGNCTGTCTTTTCTTCCAATCAGGGGCTN
NNTCTTCTGATTATTCTTCAGGGCAANGACATAAATTGTATATTCGGNTCCCGGTTCCAGN
CCAGTAATAGTAGCCTCTGTGACACCAGGGCGGGCCGAGGGACCACTTCTCTGGGAGGA
GACCCAGGCTTCTCATACTTGATGATGAAGCCGGTAATCCTGGCACGTGGGCGGCTGCCAT
GATACCACCAANGAATTGGGTGTGGTGGACCTGCCCGGGCGGGCGCTCGAAAANCCGAA
TTCNTGCAAGAATATCCATCACACTTGGGCGGGCCGNTCGAACCATGCATCNTAAAAGGG
CCCCAATTTCCCCCTATTAGGNGAAGCCNCATTTAACAAATTCCACTTGG

16529.1.edit

TCGAGCGGCGCCCGGGCAGGTCTCGCGGTGGC.ACTGGTGATGCTGGTCTGTGGTCCCC
CCGGCCCTCCTGGACCTCTGGTCCCCCTGGTCTCCAGCGCTGGTTTCGACTTCAGCTTC
CTGCCCCAGCCACCTCAAGAGA.AGGCTCACGATGGTGGCCGCTACTACCGGGCTGATGAT
GCCAATGTGGTTCTGTACCGTGACCTCGAGGTGGACACCACCTCAAGAGCCTTGAGCCA
GCAGAATCGAAAACATTCGGAACCCAAGAAAGGGCAAGCCCGCAAAAGAAACCCCGCCCGC
ACCTGGCCGNGAACCTCCAAGA.ANGTGCCCACTCTTGACTGGGA.AAA.AAAGGGAAAANT
ACTTGGAAATTGGAC

16529.2.edit

AGCGTGGTCCCGCCCGAGGTCCACATCGGCAGGGTGGAGCCCTGGCCGCCATACTCGAA
CTGGAATCCATCGGTCAATGCTCTCGCCGAACAGACATGCCTCTTGTCCTTGGGGTTCTTGC
TGATGTACCAGTTCTTCTGGGCCACACTGGGCTGAGTGGGGTACACCGAGGTCTCACCAGT
CTCCATGTTCCAGAAAGACTTTGATGGCATCCAGGTTGCAGCCTTGGTTGGGGTCAATCCAG
TACTCTCCACTCTTCCAGTCAGAACTGCCACATCTTGAGGTACGGCAGGGTGGGGCGGG
GTTCTTGCGGGCTGCCCTTCTGGGCTCCCGAATGTTCTNNGAACTTGCTGG

FIG. 15BBB

16530.1.edit

AGCGTGGTCCGGCCGAGGTCCACTAGAGGTCTGTGTGCCATTGCCAGGCAGAGTCTCTG
CGTTACAACTCCTAGGAGGGCTTGCTGTCCGGAGGGCCTGCTATGGTGTGCTGCGGTTCA
TCATGGAGAGTGGGGCCAAAGGCTCCGAGGTGTGGTGTCTGGGAACTCCGAGGACAGA
GGGCTAAATCCATGAAGTTTGTGGATGCCCTGATGATCCACAGCGGAGACCCTGTAACTA
CTACGTTGACACTTGCTTGTCGCCACGTGTTGCTCANACANGGGTGGGCTGGGCATCAAG
GNG

16530.2.edit

TCGAGCGGCCCGCCCGGGCAGGTCTGCCAAGGAGACCCTGTTATGCTGTGGGGACTGGCTG
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ATCTCATCTTTGGGTTCCACAATGCTCACGTGGTCAGGCAGGGGCTTCTTAGGGCCAACT
TACCAGTTGGGTCCAGGGCAGCATGATCTTACCTTGATGCCCAGCACACCCTGTCTGAG
CAACACGTGGCGCACAGCAAGTGTCACCGTAAGTAAGTTAACAGGGTCTCCGCTGTGGAT
CATCAGGCCATCCACAACTTCATGGAATTAACCCTCTGTCTCGGAG

16531.1.edit

TCGAGCGGCCCGCCCGGGCAGGTCTTTCAGAGGTTCGAAGGTCCACTGTGGAGGTCCCAGG
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AGCCGCTCTCTGTTGAGTCCAGGGCTTTGGGGTCAAGATGATGGATGCCAGATGGCATCCA
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AGGGCCAACTCGGTGTTCTTTGAATA

16531.2.edit

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CTCTGTGNCCACCACAGCACTCCTCCGACCTCCACAGTGGATTTGAGAACCTCAGGGACT
CCATCCTCCCTCTCCAGCCCCACAATTAAGGCTGCTGGCCCTCTCCTGGTACCATTACCCCT
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GTTCAACACCACA

16532.1.edit

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GATAGTATGCCAGCAGGNTCTGAGNCTGTGGGATAGCTGCCATGAAGTAACCTGAAGGAG
GTGCTGGCTGGTANGGGTTGATTACAGGGTTGGGAACAGCTCGTACACTTGGCAATCTCTG
CATATACTGGTTAGTGAGGTGAGCCTGGCCCTCTTCTTTT

FIG. 15CCC

01_16558.3.edit

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CTGCTGGTCCTG

02_16558.4.edit

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CT

03_16555.1.edit

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AGAGTGAGGAGCCTGGAGACCGANAACCGGAGGCTGGANAGCAAAAATCCGGGAGCACTT
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CCTGGAGG

04_16555.2.edit

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CTTCTCCAAGTGCTCCCGCAATTTGGCTCTCCAGCCTCCGGTTCTCGGTCTCCAGGCTCCTCA
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05_16556.1.edit

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CAGAGGGCCAACACTGGTGTTCTTGAACAAGGGCTTGAGCAGACCCTGCAGAACCCTCTTC
CGTGGGTTGA.ACTTCCTGGAAACCAGGCTGTTCATGTTTTCTCATAATGCAAGGTTG
GTGATGG

FIG. 15DDD

07_16537.1.edit

AGCGTGGTCGCGGCCGAGGTCCACATCGGCAGGGTCGGAGCCCTGGCCGCCATACTCGAA
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TGATGTACCAGTTCTTCTGGGCCACACTGGGCTGAGTGGGGTACACCGCAGGTCTCACCAG
TCTCCATGTTGCAGAAGACTTTGATGGCATCCAGGTTGCAGCCTTGGTTGGGGTCAATCCA
GTA CTCTCCACTCTTCCAGTCAGAAGTGGGCACATCTTGAGGTCACCGGCAGGTGCCGGGC
CGGGGGTTCTTGGCGCTTGCCCTCTGGGCTCCGGATGTTCTCGATCTGCTTGGCTCAGGCTC
TTGAGGGTGGGTGTCCACCTCGAGGTCACGGTCACCGAAACCTGCCCCGGGCGGCCCGCTC
GA

08_16537.2.edit

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CCGCACCTGCCGTGACCTCAAGATGTGCCACTCTGACTGGAAGAGTGGAGAGTACTGGAT
TGACCCCAACCAAGGCTGCAACCTGGATGCCATCAAAGTCTTCTGCAACATGGAGACTGGT
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AGGAACCCCAAGGACAAGAGGCATTGTCTTGGTTCGGCGAGNAGCATGACCCGATGGATT
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FIG. 15EE

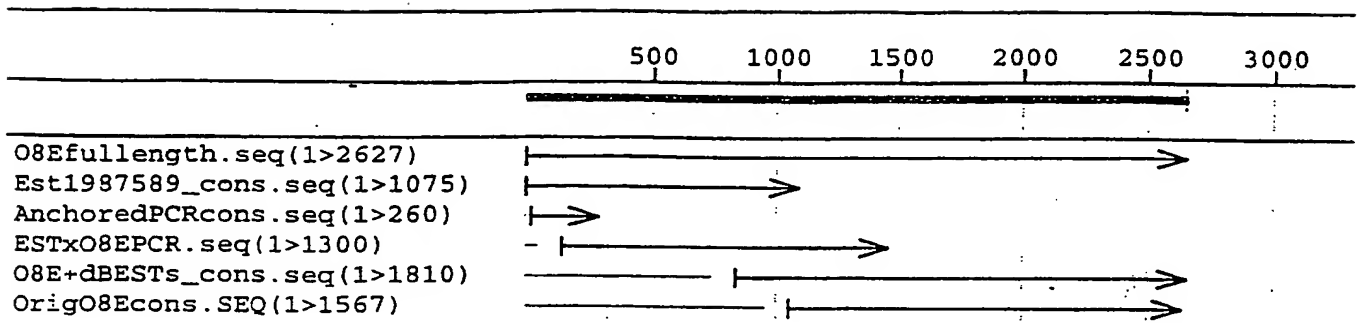


Fig. 1b

SEQUENCE LISTING

<110> Corixa Corporation

<120> COMPOSITIONS AND METHODS FOR THE THERAPY AND
DIAGNOSIS OF OVARIAN CANCER

<130> 210121.462PC

<140> PCT

<141> 1999-12-17

<160> 393

<170> FastSEQ for Windows Version 3.0

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caggatctca	gctcgtgca	acctccgct	cccagttca	agtgatctc	ctgcctcagc	180
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tttagtagag	acaggggttt	acagggttgg	ccaggctgt	cttgaactcc	tgacctcagg	300
tgatccccc	gctcgggct	cccagggtgc	tgggattaca	ggcgtgagcc	cccagcccg	360
gcccccaag	ctgtttcttt	tgtcttttag	gtaaagctct	ctgcccagc	agtatctaca	420
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<211> 540

<212> DNA

<213> Homo sapien

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attaactatt	gtgtcagaag	agatcgaata	cctgcttaag	aggcttacag	aagctatggg	180
aggaggttgg	cagcaagaa	aatctgaaca	ttataaaatc	acctttgatg	acagtataaa	240
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ggacgggcag	actgtgcta	tggcaattaa	tgaagtcttt	aatgaactta	tattagatgt	360
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gtttgtacaa	aaacccaaca	caatttctta	ctatgtgagt	gaggatctga	aggataagaa	480
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<211> 461

<212> DNA

<213> Homo sapien

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ctcccaagta	gctgggatta	caagggcccg	cccacagct	caagtaattt	ttttgtatt	240
tttagtagag	acaggggtt	cccaggttg	ccaggttgt	cttgaactcc	ttacctcagg	300
tgatccacac	gctcggcct	cccaagctg	tgggaktaca	gggttgagcc	accacgcnr	360
ccccccaaag	ctgtttcttt	tgtcttttag	gtaaagctct	cttgccttgc	agtalctaca	420
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<223> n = A,T,C or G

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ttctgagagc	tttagatgag	ttttcttttt	ttttcttttt	ttttcttttt	ttttcttttt	180
gcataatctt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	240
gttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	300
gttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	360
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gttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	480
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<212> DNA

<213> Homo sapien

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tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	240
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tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	480
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<211> 531

<212> DNA

<213> Homo sapien

<400> 6

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tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	180

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gcaccagtgc kggcactgac actctcttng gctttggctt tagcttctgc tccggcctgg 360
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ttctccagac cgagcccaat gcccatctga gctcctaatc cggccctagc cttggcllca 480
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<210> 7
 <211> 531
 <212> DNA
 <213> Homo sapien

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gcccgcaggg cttcaagggg tcccatatgc ttttggccc gcagggcctc aaggactcgg 180
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cgggatgtgg cctttttgca agggagggca atgatllgg tgaagtacch tttggctaaa 360
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actgactgca ccccccgaat ctttgaacga gcccgtatc ccltggagaa ggtatlttgg 480
attcatttga aggaattga taagaalga cacttgtaac tctttctcag c 531

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<210> H
 <211> 531
 <212> DNA
 <213> Homo sapien

<220>
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 <223> n = A, T, C or G

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cactcaggaa gaatttttcc tcttccaagc agtgaagggl tccagagta tagtaacct 180
attgottgac taggggtgac taaaaattt cttgcclaaa ggttaggatg ggttaaggat 240
tagattttct gaclgcayay ataatatgtg aactcargaa ctttaggtca tacatattca 300
taaaataatt attcacatat ttctgattt atccagaaa lcatgtatga aatgctttga 360
gtttcttga gtaactcra ttactcctcc caagaaccca tattataagt atccctgata 420
ataagaacaa caggaccllq tcataatte tggalaagag aatagcltc tgggtgtttg 480
ntcttaattt ataatatta cttgcacate lcttagtcca gactcacaac a 531

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<210> 9
 <211> 531
 <212> DNA
 <213> Homo sapien

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 <223> n = A, T, C or G

<400> 9

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ggggaacga	ccagcaacga	tctgtgaccl	gtttgttaca	gghcatgat	gagghannca	180
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tgtgcagtga	atclaaqaaa	aaatttgggg	ctglatttgt	atgttctttt	ttttcatttc	300
atgttcagag	ttacctatit	ttattgcatt	ttacaaaagc	alcttcccat	gaaggacagg	360
aagttaaaaa	caaagcaggt	cctttatcac	agcactglaa	tgaacacag	ttcaagattt	420
tcacccaag	gagccaggga	gctgggctaa	accanagaat	tttgettitt	gttaatcacc	480
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<211> 861

<212> DNA

<213> Homo sapien

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ttatgatten	gcagcttctg	caattgatta	gaaaaalaaa	caattgtttc	ttcaattgtg	780
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<212> DNA

<213> Homo sapien

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atgaagctag	caagtgatga	tatgataaa	tnaacgtgga	ggaaalaaa	acaaagact	180
tggcataagg	tatatccact	ttgatatta	aacttgtgaa	gcatattctt	cgaacaaattg	240
tgaagcggt	cctgatcttg	cttgtctctc	atttcaata	aggaggcata	tcaatccca	300
agagtaacag	aaaaagaaaa	aagacatttt	tgcattttga	gatgaaccaa	agacacaaaa	360
caaaacgaac	aaagtgtcat	gtctaattcl	agcctctgaa	ataaaccttg	aaatctctct	420
acaaagacac	gtgacttttg	caallataac	ctgaagaaat	gagatgactt	ttgtggacat	480
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<211> 541

<212> DNA

<213> Homo sapien

<400> 12

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tgcacacat. ctctctctct agctctctct tctctctctc ctctctctct tgcacacat. 480

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gcattgctgg	tagagccaaat	cctaggtctc	gtcttctgacg	tcacagaaac	gatacaccas	660
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<212> DNA

<213> Homo sapien

<400> 16

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tgatggtttc	ataaggcttt	tccccccttt	gtcagcact	tctccttcc	gcggccatgt	180
gaagaaggac	atgtttgctt	cccttccac	cacgattgta	agttglttcc	tgaggccctg	240
ccggccctgc	tgaactgtga	gtcaattaaa	cccttctct	ttatgaatta	tcnatttttg	300
ggatgtctct	tattagtaga	atgagaacag	actaatacaa	cccttaaagg	acnctgacgg	360
agaggattct	tcctggatcc	cagcacttcc	tctgaatgct	actgacatlc	ttcttgagga	420
ctttaactgt	ggagataaaa	aacagattcc	atggctcagc	agccctggag	caggaggggg	480
gcnaactat	ngctgaactg	ggcagcttcc	cttgaggcca	ggctgngccg	aacctgggca	540
gtcctgccc	ccacccccc	aggcccaag	ctgtccttg	acagagccaa	cccttccac	600
tgctagccct	aagtgtccc	aagcccaagt	ggctaggggg	ctcaggga	ccgttccac	660
tctgcctac	ttctcttacc	tttaccctcc	atacctccaa	agtagaccc	gttcatgagg	720
tcnaagg						728

<210> 17

<211> 531

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(531)

<223> n = A,T,C or G

<400> 17

agcagaggaa	gccactggcg	ctccctggctg	aaagcgggct	ccaggctcgg	gcacagaggg	60
aacgcgaaga	acaggggngg	agctgcaggg	ctgaaaggga	caagtcactg	cgagaggagc	120
agctgggccc	gggggctgaa	gcccgggctg	acgtgagggc	cgaggccggg	agacgggggg	180
agcaggaggc	tcgagagaag	ggcagggctg	agcaggaggc	gcaggagcga	ctgcaggggc	240
agaagaggga	agccgggggc	ccgtcccggg	aagagggctg	gcgcaggggc	caggaggggg	300
aaaagccttc	tcaggaaggg	gaacaggaga	ggcagaggcg	agggagggcg	ctggaggaga	360
tactgaagag	gactcggaaa	tcagaagccg	ccgaacccaa	ggagcaggat	gcagggggag	420
ccgcagctaa	caattccggc	ccagaccttt	gtgaaagctg	tagagactcg	gacctctggg	480
cttcagaaa	ggattctctt	gcaggaaggga	aggagctcgg	ccccccagg	n	531

<210> 18

<211> 1041

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(1041)

<223> n = A,T,C or G

<400> 18

ctctgtggga	acttqatnag	gaatgaattt	accat.laccc	atgttctcat	ccccaaagcaa	60
agtgtgggt	ctgattactg	caacacagag	aacqungag	aacttttctt	catacaggat	120
cagcagggcc	tcatcacac	gggtgggtt	catactcacc	ccccacagac	cgogtttctc	180
tccagtgttg	acctacacnc	tcaatgcctt	taccagutga	tggtgcacga	gtcagttagcc	240
attgtttgt	cccccaagtt	ccaggaact	ggattcttta	aaataactga	ccatggacta	300
gaggagattt	cttctgttg	ccagaaagga	tlctatccac	ccagcaagga	tccacctctg	360
llctgtagct	gcagccacgt	gactgttgct	gacagagug	tgaccatcac	agaccttcga	420
tgagcggttg	agtcacacac	cttccagag	caacaaacc	atatcagtgt	actatagccc	480
cttaatttaa	acttctataga	agcttttgg	agtttttcta	gtagtagaga	aggggggcat	540
caactgagaa	agagctgatt	ttgtatttca	ggtttggaaa	gaataaactg	aacatatttt	600
ttaggcaggt	cagaaagaga	aatgtgtcac	ccaaagcga	ctgttaactca	gaatttaagt	660
tactcagaaa	ttaagttagct	cagaaattaa	gaaagaatgg	tataatgaac	ccccatatac	720
ccttctctct	ggattcacc	attgttaacc	tttttttctt	ctcagctatc	cttctaattt	780
ctctctaat	tcaatttgtt	tatat.lccc	tctgggctca	ataagggcat	ctgtgcagaa	840
atttgggaagc	catctagaaa	atcttttgg	tttctctgtg	gtttatggca	atatgaatgg	900
agcttattac	tatgtgtgag	gacagcttac	tccatttgac	cagatttttt	ggctaaccac	960
ccccgaagaa	tgtttttgtc	aggaattatt	gttatttaal	aatatttca	ggatattttt	1020
cctctacaat	aaagtaacaa	t				1041

<210> 19

<211> 1043

<212> DNA

<213> Homo sapien

<400> 19

ctctgtggga	acttqatnag	gaatgaattt	accat.laccc	atgttctcat	ccccaaagcaa	60
agtgtgggt	ctgattactg	caacacagag	aacqungag	aacttttctt	catacaggat	120
cagcagggcc	tcatcacac	gggtgggtt	catactcacc	ccccacagac	cgogtttctc	180
tccagtgttg	acctacacnc	tcaatgcctt	taccagutga	tggtgcacga	gtcagttagcc	240
attgtttgt	cccccaagtt	ccaggaact	ggattcttta	aaataactga	ccatggacta	300
gaggagattt	cttctgttg	ccagaaagga	tlctatccac	ccagcaagga	tccacctctg	360
llctgtagct	gcagccacgt	gactgttgct	gacagagug	tgaccatcac	agaccttcga	420
tgagcggttg	agtcacacac	cttccagag	caacaaacc	atatcagtgt	actatagccc	480
cttaatttaa	acttctataga	agcttttgg	agtttttcta	gtagtagaga	aggggggcat	540
caactgagaa	agagctgatt	ttgtatttca	ggtttggaaa	gaataaactg	aacatatttt	600
ttaggcaggt	cagaaagaga	aatgtgtcac	ccaaagcga	ctgttaactca	gaatttaagt	660
tactcagaaa	ttaagttagct	cagaaattaa	gaaagaatgg	tataatgaac	ccccatatac	720
ccttctctct	ggattcacc	attgttaacc	tttttttctt	ctcagctatc	cttctaattt	780
ctctctaat	tcaatttgtt	tatat.lccc	tctgggctca	ataagggcat	ctgtgcagaa	840
atttgggaagc	catctagaaa	atcttttgg	tttctctgtg	gtttatggca	atatgaatgg	900
agcttattac	tgtgtgtgag	gacagcttac	tccatttgac	cagatttttt	ggctaaccac	960
ccccgaagaa	tgtttttgtc	aggaattatt	gttatttaal	aatatttca	ggatattttt	1020
cctctacaat	aaagtaacaa	t				1043

<210> 20

<211> 448

<212> DNA

<213> Homo sapien

<400> 20

ggacgacaag	gccatggcga	tatcggatcc	gaattcaagc	ctttggaatt	aatnaacct	60
ggaacaggg	aggtgaaagt	tggagtga	tgtcttccat	aktctaacct	ttgtgcacag	120
tgaatggga	actgttttgg	ttagggcat	cttaggattg	attggtggaa	aaagcagac	180

ggaactggta	ggaggtcaag	tgggyungtt	ggtgaatgtg	gaataactta	octttgkgt	240
coacttaaac	cagatgtgtt	ycagctttcc	tgaatgcaa	ggahctactt	taattccaca	300
ctctacttaa	taanttgaat	aaaagggaat	gttttggcan	ctgatataat	ctgccaggct	360
atgtgaragt	aggaagggaat	ggtttccpct	aacaagccca	atgcaatggt	ctgaatttcl	420
aaattatcla	alaaatqaa	ctattazc				448

<210> 21

<211> 411

<212> DNA

<213> Homo sapien

<400> 21

ggcagtqaca	ltaaccataa	lgggaaccac	cttcccttth	cttcaggatt	ctctgtagtg	60
gaagagagca	cccagtgttg	ggctgaaaaa	atctgaaagt	agggagagga	acctaaataa	120
atcagtatct	cagagggtct	taagggtgca	agcagtctca	ctggaccttt	aagtgcacaa	180
aaagggcalac	ltaagggaatc	gccaagtcac	naottttctaa	ctctgtctcc	tcacagagac	240
aaagtgaact	caagagctct	cttctttagt	ggcaactaaa	gaaaactggt	gttccccaga	300
aaaacaggag	caattagaaa	tggttccaat	atttcxango	tcgcacaaa	ggatgtgctt	360
tcctatgccc	atttaggggt	tcttctcttt	ttttctcttt	tattacccac	t	411

<210> 22

<211> 896

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(896)

<223> n - A,T,C or G

<400> 22

tgcgtgaaa	acaacggcct	octttactgt	taaaatqong	ccacagggtgc	ltaagctgtg	60
gcattctaac	caccagcctc	tgtggggggc	aggtgagggt	ccctgtgggc	ctctgggccc	120
acgtccagac	lclqtctctcl	gcttctcgtt	cttcagacgt	gltaacagca	tcctgggtca	180
cttggtaact	ggcgtgggac	tcctgtgtgt	ctccagcagc	tcctccaggn	ggtcgggccc	240
cttcaccgca	gcctcatgtt	gtgtccggag	gclqntcagc	gcctctctcl	tcctcgcagc	300
ggctgtctcl	acctctcggc	gtaccltctc	cagctccagc	tcctcggggg	ccgcagcgtt	360
ggccagctcg	gccttggcct	gcgcgtctct	ctctccacac	gctgcagccc	ggctctcgaa	420
ctcctggggg	atcacctggg	ccagggttgc	gcgtctgcta	gaaagtctcl	ttttccccc	480
ctgcgcctac	ltaaggtgac	gtctcltctc	ccgcacacag	ccclqacagc	gcagattctc	540
gcctctggcc	tcctccagct	ggcccttcag	ctccagacac	gcctctcgaa	gcttcgcctc	600
cgaatgctcc	agctcggaga	gctcggcctc	gtacttctcc	cgtaagcgtt	tgatcgagct	660
ctgggcagcc	ttctactctt	ctctcttggc	cagcgcctat	tcggccctcc	gcaggttaat	720
gacragctac	alclcttctc	ccggcccltt	ccggatttct	tccltctgtt	ctgttcccg	780
gtltaagcgc	caagctctct	cttctctgtt	gggcgcggcc	tcctccgctt	gcctctccag	840
ctccagctac	tccttcaggc	tattccgctc	catctggcgc	gcctgcagcg	tgcca	896

<210> 23

<211> 111

<212> DNA

<213> Homo sapien

<400> 23

caacttatta	cttgaattta	taatatagcc	lgtccgtttg	ctgtttccag	gclgttatat	60
attttccag	tggtttgact	ttaaaataa	ataaggttta	attttctccc	t	111

<210> 24
 <211> 531
 <212> DNA
 <213> Homo sapien

 <220>
 <221> misc_feature
 <222> (1)...(531)
 <223> n = A, T, C or G

<400> 24
 tgcaggtcac gggagtttat ttatttaatt tttttcccca galgagagact ctgtgcgcca 60
 ggctggagtg caatgggtgtg atcttggcctt actgcaacat ccacotcttg ggttcaagag 120
 attctctctg ccagcctctc agagtcagtg ggattacagg tgcctgcctac caccctcctg 180
 taatttttat atttctagtc aagacagggg ttccttatgt tggccaggctt ggtcttgaac 240
 ttctgaactc aggtgntcca cctgcctcgg cclttccaaag tgttggggtt acaggcgtga 300
 gctacccttg cctggccagc cactggagtt taaggacag tcaatttggc tccagcctaa 360
 gggggccttt tccccctca gaaagccttg ggcctctgta cctcnaasta gggcctctgt 420
 aagtcagtc atgtggtct ctgctctnac tggccacctg gggcatttg cctctgagac 480
 agccttgcca ggagcctgc atctgcaaaa gaaaggtta cttcctttc g 531

<210> 25
 <211> 471
 <212> DNA
 <213> Homo sapien

 <220>
 <221> misc_feature
 <222> (1)...(471)
 <223> n = A, T, C or G

<400> 25
 cagagaatct xagaaagatg tggcgttttc ttttacttqua tgagagaagc ccatttgtat 60
 ccttgaatca ttgagaaaag ggggcggtag cagacggcgc gacctaggga tggatcttga 120
 tggacttggg gaggcgtgac gacactctag ctgagcctg aggaactcc cggcgggag 180
 cctggggagc agatggacc tacttgaagt cagttggagt cagatttctc tcagcaagat 240
 actcttgcg tgaacttga agattctcay cctgaaagcc aggttctag ggttgaattc 300
 gtttctcact tcaatattat atctcgcac cttcctaacc tcaagagcca caaagannat 360
 cctgtgttgg atgttgngtc caatccttga acaaacagat ggggnagaa gaggagaccg 420
 gtaatagtgg gttcaactga catttgaaag aaagctcagg tgcagacct g 471

<210> 26
 <211> 541
 <212> DNA
 <213> Homo sapien

<400> 26
 gactgtcctg aacaaggag cctgacctag agagctgag gagatgcaga gtggctggcag 60
 gactggaagc caaagaacac ccaccttctt ccttctgagg agtagagcaa ccctagaag 120
 atactgtttt attgctcttg tcaacaagat ctctctgagt tgacaasacc tcaagctctg 180
 gtgactctc atctctcagt ccactttcca taagttcttg tgcagacaa tglttttttg 240
 ctctcctagc agcaacagat gtttgggggc taaaaggcat gtcctctgac cttgcaggtg 300
 gtggattttg ctcttttaca acatctacat ccttactagg ctgtgtctgt acagggatgt 360
 ccttgctgga ctgtctctgt atggggatct ctctgttggc ctgttcttca tgccttaattg 420

```

cagtattagc atccacatca gacagcctgg tacaaccaga gttgggtggtl notgatlgta 480
gctgctcttt gtcacattca catggccaaa gtatttttct caacatctcg gctclnggaa 540
g 541

```

```

<210> 27
<211> 461
<212> DNA
<213> Homo sapien

<220>
<221> misc feature
<222> (1)...(461)
<223> n = A,T,C or G

```

```

<400> 27
gaaatgtata tttatcatt ctcttgaag atcagaackc taaatcagt tttotataac 60
arcatgtaat acagtcaccg tggctcagag gtccaggag gcagtggfta acacatgag 120
aglggggggg qgggggttggg aacaaagtat tcttltcctt caaagcttca tctctcagg 180
cctcaattca agcagtcatt gtctttgctt tcaaaagtct gltgtgtgtt calqgaagg 240
atatgtttgt tgccttaatt tgaattgtg ccagggaagg hotggagatc laatttcaga 300
gtaagaaaaa ctgagctaga actcaggcat ttctctlana gaacttggcl tccagggtag 360
aatgaanpqa aaqaacatta qanctcaac aagclqanga taatcccttc aggcatttcc 420
cataggcctt gcaactctgt tcactgagag atgtttatct g 461

```

```

<210> 28
<211> 541
<212> DNA
<213> Homo sapien

```

```

<400> 28
agtctgaggt gacannaca gacaaagaaa caarragaag ccaaaagcag aaggtcccaa 60
tatgaacaag ataatcttat ctccaagac atattagaag lltgggaaat aattcatgtg 120
aactagacaa gtgtgttaag aglgalaaht aaaaagcag tggagacaag tgcclcccc 180
galclaaagg aactcaccct gactgtcccc tggggagtga gaggacagga tagtcatgt 240
tctttgtctc tgaattttta gttatacttg clghahtgtt gctclgagga agcccctgga 300
nagtctatcc caacatctcc acatcttata ttcacaaat laagctgtag tatgtacct 360
aagaagctgc taallgaclg caacllhaqa actcaggggc ggtgcattt laghahtagg 420
tcaaatgath cactttttat natgcttccc aaggghcctt ggtttclcll nccaaatgac 480
aatgccccaa gttgagaaaa atgatcataa lhtngcata aaccagacaa tggcgaccc 540
c 541

```

```

<210> 29
<211> 411
<212> DNA
<213> Homo sapien

```

```

<400> 29
taagtgtctt cctcactctt atggcaatga ccccacatct laattgatta agataatgaa 60
agtgtatttc ttacactctg tatctatcaa nagaagctga ngtgatagcc cgccllghaht 120
tgtcatccat attctgggac ltagggcggga acttctcnga atattgccag ggaacatggc 180
agaggggcaa agtgcattct qggggaatgc acatagctc agcctgggtc atgagtgate 240
laatttact ctgttcacaa ctcaattccc agcaccagtc acaaggcccc accaaatacc 300
agagcccaag aaatgtagtc ctgttgatal ggttttgnct tntcccaacc caatclact 360
cttgaattgt aagatcccll aattcccllq tgttghagga gggacctggt g 411

```

<210> 30
 <211> 511
 <212> DNA
 <213> Homo sapien

<400> 30
 atcatgagga tcttaccaaa gggatgggac taaccattt ctatttgtct gcttccacac 60
 tgccttgaag atactacctg agcttgggta atttatacc naagagatt taattgactc 120
 acagttctgc atggctgaaq aggcctcagg aaacttacag tcattgttga aggcacagga 180
 gtagcaaggg ctgtcttaca tgtcagtagg agatgagagc agagcaggag aacctgcccc 240
 ttataaacca ttccagatctc ataactcccc atcatgagaa aaacatggag gaaaccaccc 300
 tcagagacaa atccacctcc gctgggtccc tccctcagaa cgtggggatt ataattcagg 360
 attagagggg cccagagaca aaccatatca tccctcagaa gaaaccaccc ctcataglac 420
 aatcagctcc taccaggccc cacctcagaa cctggggatt gaaattcacc atgagatttg 480
 gatggggaca cagattcaaa cccatatata c 511

<210> 31
 <211> 827
 <212> DNA
 <213> Homo sapien

<400> 31
 catggccttt ctccctagag gctgggagtg ctgcccgggc tgggagggaa gctccaggca 60
 ctaccagctt tcttatttt cccgttttgt ccatgttgaq agctaccacg agccccagcc 120
 tcacagtgtc cactcaaggg cagcttgggc ctcttgtcct gcagaggcag actggtgtga 180
 ccttgggaac ttgacctggg aaacacaggt ggccttagag gattgttggc tggccccca 240
 actagtgtc cgtctctcct tctcctggag ccagcttga gtttaaggc attaatgtt 300
 agatacaagc tcttctgtgc tggaaaaaca cccctctgt gataaagctc agggggagct 360
 gaggaagcag aggccttllg ggggtgcctt cctgaagaga ggttccagac atcagctctg 420
 tccccctggt gctcccaagt ctgttctcca cctcctctt ctgggagcag ctgcacctga 480
 ctggccacgc gggggcagtg gaggcacagc ctccaggttg ccgggctacc tggcctctc 540
 tggcttaca ayttaggttg gctcagtttc cttccacctg agggagagac tctgacctct 600
 accagttctc ctgcccctgc cactcatctg ggtggcttgc tctcagaaa ggcggggcat 660
 gctttctaaa caccagccca ggaggtttgt agggcatct ccaggtgggg aaacagtctt 720
 agataagtaa ggtgactllg ctacagcttc ccagcaccct tgacttllga ctctcagcgc 780
 agcttgcatt tcnccacctg gaaccgaaaa catgcctllg tatnaaa 827

<210> 32
 <211> 291
 <212> DNA
 <213> Homo sapien

<400> 32
 ccagagcttc cttctctttg gagaatgggg aggcctcttg ggggacaga gggtttccac 60
 ttgatgaccc tctagagaaa ttgcccaga agctccctt ctggtcccaa cctgcagacc 120
 ccacagcagt cagttggta ggccttctg tgggaggtca cttggctcca ttgctgttt 180
 ccaaccaatg ggcaggagag aaggccttta ttctctgccc acccattctc ctgtccagag 240
 acctcagttt lcaatcaggg ttgtccagca acggtacctt ttacacagtc a 291

<210> 33
 <211> 491
 <212> DNA
 <213> Homo sapien

<400> 33

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tgcattgagt tttatttatg cgtttttagl: tggaaaacaa agtgtcccag cagcatgact      60
gaacatcact cacttccccf acttgatata caagggcuno gccgagagag: cagaccagga      120
llcgaaccaa acagcaacag atatttggg atcagctgtc aggcaggtgt ccgtcacba      180
cccaracqet gttacgttgc acatgactgt aungtgcac glaacagcac tgtatcttcc      240
tcccatgaac agttaoctgc catgtatata catgattcag aacattttga acagtttaatt      300
ctgacacclg aataatcccc lcccaanccg taaaatcact ttgatgttlg taacgacaac      360
atagcatcac tttaacnccag aatcatctgg aaaaacagaa caacagatcc atacatctla      420
aaaaatgctg gggtagggca ggcacagact caagcctgl: atccnagcac tttaggaggg      480
ttaagcgggl n

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<210> 34
 <211> 521
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc feature
 <222> (1)...(521)
 <223> n = A,T,C or G

```

<400> 34
tgggtgggaa agaaagccaag gccaaagggc: lartggggca gctgcagclg gaggagaggg      60
agcagaggaa gcagagagag cagcagagtg tgtggggcc: gccagagatcc cttaacttgc      120
tggatggaaa tgaaaattac ccgtgtcttg tggatgggga ccgtgatgtg atttccctcc      180
cccaalaa: caacagtgag aagacaaagg claaagcaaac gactcttgat ttgttttllg      240
aagtaacaag tgcacacag: ctgcagattt qcaaggatgt catggalgc: ctcatctctg      300
aatggcaag aatgaaaaa gtacacttta gaaaataaay aggaaggatc actccagat      360
acagagagag atgcagcttc tggacaactt cagagatccc caacgaatcc cagtgtctga      420
aaggacggg: ccllactlct ggtggtggaa caagtcocgg tggtagatcc tggaaaggaa      480
cctgaangtg gtgtacccc: tccaaaggcc accttgcca c

```

<210> 35
 <211> 161
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(161)
 <223> n = A,T,C or G

```

<400> 35
tcccgctctc agaggggccc lgcacactgc agtccggccc gctcctctgc tcccccgcg      60
cgcgcgctg ccgacggyca qcatqcttgc agaggtgggc tgcacgcag: agtactctgc      120
gccgcgcgcg ctgctgcgcg tgcctgcgct gctgtctctg c

```

<210> 36
 <211> 343
 <212> DNA
 <213> Homo sapien

```

<400> 36
ggcgggtany catggaactg agaagaacga agaggtttc agactacgtg gggagaagtg      60
aaaaaaccaa aattatcgcc agatctcagc aaaggggaca gggagctcca gacagagag:      120
ctattattag cagcagaggag ccgagccagc tgaatclgl: clalclmagg atacaagagg      180

```

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agctcaggag attggaagaa atatgatgat atgactatct aaactcaaaa tgggggggale 240
acactgcttt gaaaaagcat ttcatggag tgaagagat aaagtggaga ccaaggtgna 300
gttcacaaag tgaatgaact cccaaagaga ttagctcacc t 341

```

```

<210> 37
<211> 521
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(521)
<223> n = A,T,C or G

```

```

<400> 37
telgaaggtt aaatgtttca totaaatagg gataatgrta aacacctata gntatagatt 60
gtttggatt aaatgagata atcatatgta aattatgltg ctggcatata gaaagattgt 120
cgttgttgt gatgatgat alqatgatga taatakttt ctatccccag tgcacaaclg 180
cttgaacclg tgaatgata aatcaatgtt tcttgaactg agatcaatct ccccatgttg 240
telggtgat aaagccctac attttcttcl aaaggagatg acatttgagg aagutcttaa 300
aaagaaatcg atgacttca ctagccactg cttggtgair coattggact tttatcatct 360
ctccatragc tctcaclclg ccaagccctc attalgtat gtgtgclt ctgaagcttg 420
cagclgggtc ccatcmggca gaataaaaat catctttca taatatagtg accctclcll 480
lctatttgca ttcccaaaag ccaagcaatg tgggaggclg 521

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<210> 38
<211> 461
<212> DNA
<213> Homo sapien

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<400> 38
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aaaggttcag tctgtagctc ttctaaclg aaataggagc ctttcagttg ctccaggtca 120
gatttcctta gttgtgtatc taalaaagag aaacatctgt ggttccctcc aglclctttc 180
tgggggaact gggcccaatc ctcatctcat ttaallagag gaatatagaa tcaaggtaca 240
atttactgll gtttaacant gccacaaaga calgtttggg agclatttct tgaatttgtt 300
aaatgtctgt tttgtgtgc tcataatgcl tccaaazatc nggtgtctgg caaagagagc 360
tactgttaca gaagccagca aaagagctc tgttcaclca caccctcggg gatatcagga 420
attgaactca gttgtgtcaa atccagtttg gcttatcttc t 461

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<210> 39
<211> 769
<212> DNA
<213> Homo sapien

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<400> 39
tgagggaact attggttclg tctctgctat tcaattcccc aagcccacll gttcctgag 60
cgtctctctt clccttccct ttgtttgtac cclctcttct atctggagcc ttctctcttt 120
gatgtaagct tttcttcttc ttgttttttc tgaattctct ctatgcctgt tctgggclgcl 180
tctcatctgc atcattctcl lcaagclctg tagcttcttc ctctctcttc lgtctctctt 240
tcttttcttt lcttttggag ggtttctct ctgctgag ttgaggggca ccagggtctc 300
ggcctttgag acagagccag aaggcctgct cttgggctc taggagagca agcttgagct 360
tcattgclgt ccaagacgg gaagccttgi gtgtgtctc cccctcaacg gcttgagac 420
gcctctctc agtcagaatc ttgggggact tggacccclg gttgtgtctc tcaatgagc 480
tctccagctc ttgttttggc ttctctctac ctgaagclca tctagcctc tctcaaacct 540

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tcvqatcacag	caagttgggc	ttgggatgat	tataaagggt	ggctctcotta	ganaggctcc	600
ttatctgtac	tcacatctgc	ccagtttcca	ctaccaagtt	ggccgcagtc	ctgttgaaga	660
gctcattcca	ccagtggttt	gtgaactccl	tggcagggbc	atgtctctac	ccatgagtg	720
cttgcttcag	ygtcacccctg	agagcctgng	tgataaccatt	ctccttccg		769

<210> 40

<211> 292

<212> DNA

<213> Homo sapien

<400> 40

gaccccatga	ataaactct	agaggacaaa	actaacacca	atagagtgta	gtctaglkka	60
aaactcgaaa	aatgagcaag	tctggtggga	gtggagggaag	ggctatacta	taattccaag	120
tgggcctct	gactttaaca	agccatgctc	attatacaca	tctctgaact	ggccatacca	180
ccctlkagca	ggaaacagg	cttgggactt	ctaagggana	ttaacatgca	ccacccacat	240
ctaacctacc	tgcctgggtg	gtaccatccc	tgcctcctg	aaatcagtc	tc	292

<210> 41

<211> 406

<212> DNA

<213> Homo sapien

<400> 41

ttggaattaa	ataaacctgg	aacagggag	gtggaagtg	gagcggatg	tcctccatat	60
ctataccctt	qlgcacagll	gagcgggano	tgtttgggl	tgggcctct	tagagllgml	120
tgatggaaan	agcagacagg	aactggtgg	agglcagtg	gggaagttg	lgnatgtgg	180
ataacttacc	tttgtgtctc	acttaacca	ggtgtgttc	agcttccctg	ccatgcaagg	240
atctacttta	attccacac	ctccllkanta	aatigaataa	aggggactgt	tttggcaact	300
gctataatct	gcccggctat	gtgacagtag	gagggagtg	tttccctaa	caagctccal	360
gcactggctc	gactttataa	attatttaat	aatatgaact	attatc		406

<210> 42

<211> 381

<212> DNA

<213> Homo sapien

<400> 42

aaactggacc	tgccanaggg	aatatgaatt	actgcarggl	ctgagcagc	tcagccctc	60
lacctcaggg	ccccacagcc	atgactaact	ccccagggg	ggggagggtg	aagggggcct	120
gtctctgcaa	gtggagccag	agtggaggaa	tgagctctga	agacacagca	ccccgctllc	180
tgcacccagc	caagccitaa	ctgcctgctc	gacccctgac	cagaaacccag	clgagctgnc	240
ccctccagg	acaggaagcc	tgggggagg	agtttacaa	ccaaagccct	ccacccctc	300
ccctgctggg	gagcctkaga	catcagagct	ctaacaatl	ggggaggggg	aaggaagaaa	360
actctgaaa	caaatcttg	t				381

<210> 43

<211> 451

<212> DNA

<213> Homo sapien

<400> 43

calgagtttc	accactgttg	gacaggctgg	tctcgaaetc	ctggcctcaa	gcaatccacc	60
ggcctcagcc	tcacaaagtg	ctgggattac	agctatgagc	catggcacca	tgccaaaagg	120
ctatatctct	ggctctgtgt	tcccgagact	gcttttaate	ccaaattctc	tacatttagc	180
ttaaaaaata	ctttattcat	ggtcaatctg	gacataatt	actgcatctt	aaglttctac	240

tgatgtatat	agaaggctaa	aggcccnatt	tttctcaaat	ctaghtaggt	aaccanacnt	300
aaanlcatta	attactttca	acttaataac	lcaattgacal	tcctcaaaaag	agctgttttc	350
aatectgato	qnttcctttat	ttttcaaaa	tatatthccc	atgggatgcl	aatttgcaat	420
aaggcgcata	atgagaatac	cccaaacctgg	a			451

<210> 44

<211> 521

<212> DNA

<213> Homo sapien

<400> 44

gttggacccc	ccgggacchq	aaagacactt	cttgcocagag	ctglggccgg	agaagctgat	60
gttccctttt	attatgcttc	tggatccgaa	lcttgatgaga	lcttttgtgg	tgtgggagcc	120
agccghatca	gaatcttttt	taggggaagcc	aaggcgaaag	ctccttgtgt	tatatttatt	180
gatgaatttc	allctgttgg	lqgyaagaga	attgaatctc	caatgccttc	atattcaagg	240
cagaccataa	atcnaacttt	tctgaaatg	galggtttta	aaccnactga	aggagttatc	300
ataataggag	ccacaaactt	cccagaggca	ltagataatg	ccctaatacc	gtcctggkcc	360
lcttgacatg	caagttacag	ttccaaagcc	agatgtaaa	ngtcgaacag	aaalctttga	420
atgggtatct	actaaacttc	agtttgatca	atcccgctga	tcacagaact	atagccctga	480
ggtaactggg	gcttttccgg	aagcagagtt	gagagaactc	t		521

<210> 45

<211> 505

<212> DNA

<213> Homo sapien

<400> 45

gcctacacac	lccagaaagc	ghclacactg	caactggctg	tcagtctcag	aggtgggatg	60
cagatctctg	tgaagacct	gaactgtaag	annctactc	togaagtggc	gcagagtgac	120
accatygaga	acgtcaaagc	aaagatccac	qacaaggaag	gccllyactcc	tgacnagcag	180
aggtctatcl	clgcnaggaa	qnaagcttga	gatggdcgca	ccctgtctga	ctaccacatc	240
cagaaagagt	cyacccctga	cctgggtgct	cgclccagag	gtgggatgca	ratclccgtg	300
aagaccttga	ctggtaagac	catcaccttc	gaggtggagc	ccagtgcac	ratccqqaat	360
gtcaaggcaa	agatccaaga	taaggaaaggc	atccctcccg	atcagacagc	gttgactctt	420
qctggqaaac	agclggaaag	lqgaagaccc	ctgtctgacl	acacactcca	gaaagagtc	480
actctgaact	tggctcttgc	cttgaggggg	gggtgclhang	tttccctttt	taagggttcc	540
acaaatttca	tigcactttc	ctttcaataa	aghtgttgca	ttccc		585

<210> 46

<211> 481

<212> DNA

<213> Homo sapien

<400> 46

gaactggggc	ctgagcccaa	gtcatgcctt	glgthccgat	ctgccgtgic	archclgthc	60
ctgcccccca	ccctcccttc	ctggtcttct	gagccagcac	catclctaaa	tagectattc	120
cttctctgaa	atcacacaca	catgcggggc	acacataccc	yrtgcccctg	agatggggaa	180
qtanqaqqa	lqnatagagg	accctacatt	gtacagaaag	nggggcaggt	gcagataaaa	240
gcagcagacc	cagcggcagc	tgaggtgcct	ggaynacagt	tggggccggc	attcgggctga	300
gcacctgatg	ggcctcatct	cgtgaatcct	cagggcagcg	ccacagcaga	ggagtttaagt	360
ggtaacttgg	cagagcagag	caggagactg	aggttcagag	tnagagctaa	gctgccctgg	420
aaatctbba	tcttgcctgc	nnccctgtat	gaagccccct	tcctgcccct	acaattctcg	480
a						481

<210> 47

<210> 461
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> {}...{461}
 <223> n = A,T,C or G

<400> 47
 atgaatctctt cttttgcacc caggtttggag tgcagtgtct ccatctttggc tctctgcagc 60
 ctttaacctcc caggttcaag ctatctctct gccaaagctt tccacatagc tgggactaca 120
 ggtacaencc caccacacac cgtctaaatt tttctatttt ttgtagagac gggatctcgc 180
 cactttgcac aggtctgtcc catctgcacc tctagcagat ctgcctacct cagcccccca 240
 acgtgttagg attacaggcg tgaagcaccg caccagctt ttgttttgc ttttaattgaa 300
 tcaccagttc cctctcgtgt ctctgcagca gctctgcagc atgttttgc tctgtgacct 360
 tctctcaggg gactctccat gctgaatgag ggttaggata catgctctct tttccccggg 420
 ttcagagaaq cctcagacac cagcatgata ttccagggta g 461

<210> 48
 <211> 571
 <212> DNA
 <213> Homo sapien

<400> 48
 ataggggctt taaggngggg attcaggttc aatgaggtct taaggccagg cctcttctcc 60
 agcaagactg gggctccttag atgagaagag gacacccagc gttcttctct ctgccgctgc 120
 aggatgcctc aagaagggcg cttctctgca ggcagggagc ggcgcgacca gaaaccgacc 180
 ccttcaatct cgtctctgag cctctagaa cagagagata actgtctgtt ggctctcagg 240
 cctctctctt agtatctct tctgctctcc tctgagctc acacacacac cctctcctct 300
 taactgatgt ctctctgtc tctctcagac attgctatga gctctctctt cactcactgt 360
 tttgcagttc ctctctcagc cctctctctt tctctctcag ctctctcagc tttcaattta 420
 tagtctcagc cctctcagc gctctctcag cctctctcag ctgagctaaa cctctctcag 480
 ctctctcagc tttctcagc gctctctcag atctctcagc ttgcagagat tctctctctt 540
 cctctcagc gctctcagc cctctcagc n 571

<210> 49
 <211> 511
 <212> DNA
 <213> Homo sapien

<400> 49
 ggtataatgaa gttgttttat tttagcttgc cctctcagc tctctctctt tttctctaca 60
 caacaaatat cctctctctt cctctcagc atctctctct tctctctctt aatctcagct 120
 taacacagag cctctctctt caacacacac aaatactctt tctctcagc tctctctctt 180
 actctctctt attctctct ctactctctt ttttttgc tctctctctt ttaagagagc 240
 cctctcagc cctctcagc ggtctctctt tctctcagc tctctcagc acatattcaa 300
 cctctcagc cctctcagc cctctcagc caacacacac taattctct tctctcagc 360
 tggctctctt cctctcagc gattctctaa atctctctt cctctcagc tctctcagc 420
 tctctcagc tctctcagc tctctctctt tctctctctt tctctctctt gctctcagc 480
 cctctcagc cctctcagc ggtctcagc g 511

<210> 50
 <211> 561
 <212> DNA

<213> Homo sapien

<400> 50

ccactgcact	ccagcctggg	tgacggaglg	agactctgtc	tcaaaaaaac	aaacaaacaa	60
acaaacaaaa	aactgaaaag	gaactatagt	tccctcttcc	tcataataga	atacattatc	120
tcaacagatt	gltgalkaac	taacatatgc	ttggatattg	tctaatgtgt	ggggatatac	180
caagaggttc	tgcagaactt	catggagcat	gaagataaat	aaacaaagtt	aatttcacgg	240
ccaggcatgg	ttgtccacac	cttttagccc	agcactlbgg	gaggctgagc	caggtggatc	300
acttggggcc	aggagttcc	ttgtgcagtg	agccaaagatt	gtgccactac	tctccaggtt	360
gggcaacaga	gcaagaccct	gtctcagggg	gaacaaasag	ttcaatttcag	attttgttaa	420
gtgctgtaaa	ggaagtaaat	aggttgatat	tcaagagagc	acctgaaggc	caggcgttgt	480
ggctcaccgc	tgtgtgtetaa	cgttllggga	agcccgagag	ggcggatcac	aaagttagga	540
gaattttggc	caaggaatgtt	g				561

<210> 51

<211> 451

<212> DNA

<213> Homo sapien

<400> 51

agaaatcatt	tattgggttt	taactagct	aaacaaactga	aalcaatttg	gcactacitt	60
atacagggat	tacgctgttg	tatgcagcat	cttaaalac	gtaccaggac	cactgtctgt	120
cttaggtctg	tattcagtc	tccagcatgt	agcactataa	aataactgtt	agtgghmttl	180
taaggaagac	tgtacagggt	gtgttgcaag	ahqacattca	ccaatllglg	anttatttca	240
atccaggaag	tacclllcac	lclalaaat	tgtcataggt	aaacatgtgg	tgttagcatt	300
gagagatgca	caacaaatgt	ttacataaaa	gttcagacat	tataatgata	aglgaaclga	360
aaaaaiaaaa	aacccacat	ctcaattttt	glatacaagt	aaagaaallc	nttcaaaac	420
atacgaallc	gaallcaglg	ggtaaaagc	c			451

<210> 52

<211> 682

<212> DNA

<213> Homo sapien

<400> 52

caaaatctta	atataactct	llgaaacaaq	ttcagakgaa	alaaacatca	aagttttgaa	60
aaacgtgaag	attacettan	ttgcacata	ttctctcttg	ccccaaatca	gcattttttt	120
tattttctatg	caaaagtatg	ccttcaaaat	gctlcaatga	tatatgatat	gataacacaa	180
ccagtttttca	aatagtaaaq	ccagtcactc	lgaatttgta	agaaataggl	aaagagltat	240
aaagcaatll	acaaacacaa	acaaacacaa	acaaacacgt	gtgcacacgc	antgcacaa	300
aaacatttgg	cctctoctan	aataagacaa	tgaagaccc	taattgtgtc	caggagggaa	360
cactgtgtca	ccctcccta	caatccaggt	aglllccctt	aatccaatag	caaatclggg	420
catattttgag	aggagtgtat	ctgcacacaa	agtttgaaat	cctglgggga	accattcatn	480
lcaaccccat	ggtgacctga	aaatgttcca	ataatttttc	gtccacactt	ctgtgtgtgt	540
ctcttccaca	tctccacata	gacccagac	cagctgggac	ctgggtgggc	atgcatttgc	600
tgttagagca	agtcataaggt	ctgtcttttg	acgtcacaga	agcgatacac	caaatllgctt	660
ggtcgggtcat	tgtcataacc	ag				682

<210> 53

<211> 311

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)... (311)

<223> n = A, T, C or G

<400> 53

tttgacttta	gtagggggtct	gaactattta	tttcaacttg	ccmgtaatat	ttaraccyta	60
tataicckkc	attatgccat	citatcttct	aatgbcagg	gaacagwtgc	taamctggcl	120
tctgcattwa	tcacattaaa	aalggccttc	ttggaaatc	ttcttgaket	gaatzaaqga	180
tcttttavag	ccatcattta	aaqcmggntt	ctctccaaca	cgagkctgct	aaaggggggk	240
gagctgtgaa	clckgectga	agcctttccc	atacacactg	aatgacmtg	gltttctgac	300
agbgtgagtt	a					311

<210> 54

<211> 561

<212> DNA

<213> Homo sapien

<400> 54

agagaagccc	cataaalgca	ctcngtgtgg	gaagaccttc	agtcagagcl	caagcctttt	60
cttcacatcat	cgggttcata	ctggagagaa	accttatgta	tgkcahgwat	ggggcagagc	120
ctttgggttt	aactctcacc	ttactgaacw	cgttaaggatl	caacacaggag	aaaacccclw	180
tgtttgtaat	gagtgccgca	aaqcttttcc	toggagllcc	actcttggtc	agcctcgaag	240
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ctccacagtc	accctacacc	agccgagllc	accttgagga	gaagacctat	gactgtgggt	360
actgtgggaa	ggccllcaaq	cggaagtcaa	ccctcalkca	gcacagaaa	gtlccacagc	420
ggngagctcg	taagtgcaga	aaacatgggt	caqcccttgt	tcatygcclw	agcctcacag	480
cagatggaca	gattcccaat	ggaggggagc	acggcagaac	ctttacccat	ggtgcacalc	540
tcattclgcy	clgqgcagtt	c				561

<210> 55

<211> 811

<212> DNA

<213> Homo sapien

<400> 55

gagacagggt	ctcaccclcl	caacccaggct	ggaatgcagcl	qntgcgatct	taegttagctc	60
aatgcacccc	tgcacctctg	gaactaaaaca	atclclccctgc	ctcagccctg	caanbaqctg	120
ggactgtggg	tgcattgccac	catgcclggc	taacttttgt	ayklctttctc	aagatggggc	180
tttgccatgt	tgcacalycl	ggtctttqaac	tcctgagclc	anagatctg	ccacccctcg	240
cttcccagaa	lgttggqatt	acaggggtaa	accacacagc	ctggccccat	tagggclallc	300
llagcctcua	cttgcctcact	gagattaatc	akaggaatg	ataagccctg	gaaggaacaa	360
atttttacta	ggctttggat	attttttcc	tttttcagct	ttatacagag	gattggatct	420
ttagttttcc	tttaactgat	aaacaaacat	tgaaaggaa	laagttttacc	tgagattcac	480
agagataacc	ggcalkcactc	cccttgcctca	ttccagclct	taccacatca	attattttcc	540
gagglgcayy	atanaggcct	ttagttctgt	ttcgacattt	ttcttccact	lcllttgtaaa	600
ccgtttgct	gacaaatgga	attgacagcg	tatgcacatga	ctattccatt	tgtcaggcat	660
acgtgttcaa	tttttccacc	aatcccltgt	ctctctitgg	agagatcttc	ttatcagcta	720
gtccttttgc	aaagatcaat	gaactttctt	ctagglatc	tattgtccgt	tcacclggclg	780
gaacccctgg	gaacaggact	aaaacctcca	g			811

<210> 56

<211> 591

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature
 <222> (1)...(591)
 <223> n = A,T,C or G

<400> 56

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tcncagagac	ccccclagag	cggtttctg	gtggagagca	tggcagtcac	aggccaaat	120
acaaaactag	ggggctctgt	cttctcatac	alcatacaat	tttcaagtat	tttttttatg	180
tacaaagagc	tactctatct	gaaaaaact	taaaaaatat	atcgagacag	atagtttatg	240
cctcctagga	agaaagagag	agagagagag	acggggcagc	tgggtacaga	ttcclgtccc	300
ctgttcaccg	ggaccactac	cttctgcca	ctggtttccc	ccacagcttc	acccatcatg	360
tcnccagga	agtgcacagg	taggtggggg	ccagtggaga	caggaaacag	ccacatactt	420
tggcctggaa	gataagagag	agctctcaga	acacactggg	agggagagca	tcacacnagg	480
cgtgccccan	gagcttccca	cctgctgctg	gctcctctgg	tggctttggg	aacagcttgg	540
gaaagccatc	ctgggtgggg	ccccactggg	cttttgggac	cgtgtggaaa	g	591

<210> 57
 <211> 481
 <212> DNA
 <213> Homo sapien

<400> 57

aaacattgag	atggaatgat	aggggtttccc	agaaacaggl	ccatatttta	actaaatgaa	60
aatlclagall	lacagccttc	tcasatacct	gacttacttg	atatctcaac	cagagctaac	120
tttacctctt	tcncccllcn	alagagaggl	aatcggatcc	acaatttata	alacclglcn	180
atttttcttg	tattaaacct	ctatctatgt	ttaagcctat	tagggtaccl	aatccttaca	240
aataaacagg	tttaaaatca	cctcaatagg	caactgcccc	ctcgttttcc	ttctttgact	300
aaacatctcg	aatgcltlaag	attttccact	llcgttgcctn	gcagtacaca	gtgttacact	360
ctgtattcca	gaattcttaa	allatnagaa	aaggaaatga	caatttttgt	attccllctg	420
agcaggggccg	ggaggcaaca	tcattctacca	tgttagggac	ttgcclgccl	gacttacttt	480
a						481

<210> 58
 <211> 141
 <212> DNA
 <213> Homo sapien

<400> 58

actctgtcgc	ccaggctgga	gcccabtggm	gcgactclcn	ctcctgcaa	gctmccgctc	60
acaggtctct	gactcllctc	tgctcagca	ctggagatag	ctgggaactac	agggcgcagc	120
caccatgccc	agctaatttt	t				141

<210> 59
 <211> 191
 <212> DNA
 <213> Homo sapien

<400> 59

acattaaaga	cataggngaa	tttclclag	gagagaaagc	ttacaaatgt	acggtttctg	60
acaagacttg	ggagtgtatc	acacctggaa	caacataclg	gacttcncaa	tggabagaaa	120
ccttacazgt	gtaalagatg	tggcaazgac	llcggagagc	agtaaacact	tattcaccat	180
caggcaalcl	n					191

<210> 60
 <211> 480

<212> DNA

<213> Homo sapien

<400> 60

agtcaggatc	atgatggctc	agtttcccc	agcgatgaac	yyggggccaa	atatgtgggc	60
tattacatct	gagggccgta	ctaaagcatga	taaacagllh	qataacctca	aaacttcaag	120
aggttacata	acaggtgac	aagcccgtag	tttttctcta	cagtcaggtc	cyccggcccc	180
ggtttttagct	gaaatatggg	cattatcaga	tcfgaacaag	gatgggaaga	tggaccagca	240
agagttctct	atagctatga	aactcatcaa	gttaaggttg	cagggtttaa	agctgectgt	300
agtctctct	ctatctatga	aacacccccc	tatgttctct	taactaatct	ctgctcgtll	360
tgggatggga	agcatgcccc	atctgtccat	tcatacgcac	ttgctccag	ctgcacatct	420
agcaccaccc	ttgtctctct	ctacttcagg	gagcagattt	ctctcttact	gatgectgt	480

<210> 61

<211> 381

<212> DNA

<213> Homo sapien

<400> 61

cttctgattt	ccttcaattt	gtcaggtttg	attttatgaa	gttcttcaag	ggctaactgc	60
lqlqlalalal	agctttctct	gagttccttc	agclgaltgt	taaatgaatc	catttctgag	120
agotttagatg	cagtttclll	ttcagagaga	tataattggt	ctttaagctc	llggcataal	180
tcttcttttt	ctgatgaact	tctatgaagt	aaactgatac	ctgactcagg	tgtgttaactg	240
agctgactgt	ttttaattct	ttcgtttaat	agctgctctt	cagggaaccag	atagataagc	300
ttactttgat	attctttaag	ctcllgttga	ggttgttoga	tttcataat	llcccaqgtac	360
cactggttat	cccaaacctt	t				381

<210> 62

<211> 906

<212> DNA

<213> Homo sapien

<400> 62

gtggaggtga	aacggaggcc	ggggggggg	ctacccagg	agcgaggagc	aaagggggcg	60
tgaggcaact	agcccgccgc	accccgccga	caggaagccg	tcctgaacgt	gggttccggg	120
laguygaggy	gcccgggtag	tcttcgcagg	gcccaggggc	tggagtccgc	tccacagccc	180
cgggccgtcg	gtttcttact	lactggaact	ccccggcgcc	cggtccctgag	gactggctcg	240
gcggaggggag	aagaggaaac	agacttgagc	agctcccggt	tgtclggcaa	cttactlgec	300
gaggaactct	catttcttcc	ctcgtccttt	caccccccac	ctcatgtagn	aaggttctga	360
agcgtccggg	gggaggaaga	acctgggcta	ccglcttggc	cttccmccc	ccttcccggy	420
gagctttggt	gggcgttggg	llggglllg	gggggtgggt	gggggttctt	ttttggagtg	480
ctggggaaat	tttttccctt	cttcnggtcn	ggggaaaggg	aatgcccac	lccagagagc	540
atgggggcaa	gaaggacggg	agtggaggag	cttctgggac	tttccagccg	tcctccgggg	600
gcggcagctc	tcccgagcga	gaggttcacc	gcttcttctc	gaagcacaag	cggcataagt	660
cccaacactc	caaagacatg	gggttctgtg	cccccggaag	agcatccctg	ggcacagtta	720
tcaaaccttt	ggtggagtat	gatgatatac	gctctgallc	gggacacttc	tccgctgggg	780
tggccttcac	acagagccga	agggagaaag	acgaacgtcg	tggatccagt	cggagccgac	840
gectgcacaa	acatcgtcac	ccccagccac	ggcgttcccg	ggacttacta	aaagctaac	900
agacccg						906

<210> 63

<211> 491

<212> DNA

<213> Homo sapien

<400> 63

gacatggttllg	cclygcagggg	accagagaca	aknggattag	ccagtgtctca	clgttcttta	60
hgtttccaga	gaggtatggg	acagctctca	ggtcagaate	caggctgaga	aygcatgct	120
ggttggggg	ccccggaagc	acggtccgga	tctccclgg	cacagcglw	gacccgtgc	180
tcaggcttgg	ggtaaccaaa	tcgtgtctg	tactgttttg	gccccatggg	gtgagaggaa	240
aacclagaaa	aggtattggtc	gtgctaagga	atcagctgcc	ccctcatcct	cggcatccan	300
tgctggtgac	aacatattcc	ctctccaggg	accagagctc	ggtgaactca	caatgggctg	360
agtggcctct	ggaggctcgt	ggctcaggga	agggctccgt	aaggctgata	ggctgaactg	420
ggtaggggtga	gggtttctga	cccttgcctt	cccatcccat	aacngctgtc	aatgagctca	480
cactgtggtr	a					491

<210> 64

<211> 511

<212> DNA

<213> Homo sapien

<400> 64

gatggcatgg	tcgttgcata	tgtgcctgct	gggalggggo	acttctctcl	gtgagcccag	60
gggacccgcc	tgccctggga	gcttggggca	ayyaggggaag	agtgaacca	ggaaggtggg	120
gctgagagca	ggggcagagc	ccagllccag	gagtggctcl	cggccctcaa	agctctccag	180
gggaactgctc	aggagtgatg	gtgcccctgga	gtttgcccua	acttccctgy	cccccctgga	240
aggtgcctgg	ctgctccagg	cctctaggtc	gggtctgatgg	gtttclccan	gacacaagta	300
tcattcaagg	ccccctctca	ccagllctgc	nggcccacaa	tggtngacag	gctgtgtctca	360
caacccctctc	gcttgccttg	ccctccatca	ggaggagaca	gtggaacctt	cgggaagclc	420
ccagcatctc	agcagccctc	aaaagtctgc	ctggggcang	ctctggttct	cccgagclggc	480
ggtcatctgg	gcttggcctg	ctctctctcg	a			511

<210> 65

<211> 394

<212> DNA

<213> Homo sapien

<400> 65

taaaaaagtg	taacaaaggt	ttattttagac	kkctcttcctg	ccccagala	caggatgtct	60
atgtaaaccc	clatcllcca	agagaaagac	aacattttggc	alawactaaq	tcagtgcctt	120
gctlaacatga	cattgagctcc	ntccaanagt	gggttttaagc	taaaactaac	tgacgatatt	180
ggcgggggato	ctgcagtttg	gaactgctgc	cggglctgto	cagggttccg	ggclclgllcl	240
tggcaactcat	ggggacagge	atcctgcttg	tcgttggggc	ccccclggag	cccttccgtg	300
agctcgaggg	clclgagccct	ayngggctct	agggcagtg	gacctccate	cggaaactaac	360
aynggtccgg	gagaggccctc	ctgggctatg	tggg			394

<210> 66

<211> 359

<212> DNA

<213> Homo sapien

<400> 66

ccagcgttcc	tttatggatg	tacattcaaa	cagtcclgct	gagccatccc	gggctgacag	60
tcacgttwaa	gacactaggt	cgggogccac	aglygcaccc	aaggagaaga	agaatttggc	120
atttttccat	gaagatgtac	ggaaatctga	tgttgaatat	gaaaatggcc	ccccaatgga	180
attccaaaag	gttaacacag	gggtctglaag	acctagtga	cllccctaaqt	gggaagagg	240
aalggagagt	agtattttctg	atgcctccang	aacatccagc	tataaaactg	agatcataat	300
gaaaggaagt	tcctatatcca	atatgagttt	actcagagac	agtagaaact	attcccagg	359

<210> 67

<211> 450

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(450)

<223> n = A,T,C or G

<400> 67

taggaataac	aaatgtttat	tcagaaatgg	ataagtaata	ataatcacc	cttcatctct	60
taalgcacct	tctctctctt	ctgacacagg	gacacacatg	ggtaacatag	angcatggga	120
agtggaggag	gacacaggac	tagccaccca	actctctctt	cgggtctctt	aagatgacly	180
cttctagagat	ggaggaggca	aacagggtcc	ctcaatgtac	caatgtgtca	cttatagcac	240
cagctccaga	tggccacatg	gttgcagctg	gaclcaatga	aactctgtga	cannccagaa	300
atacctgctt	cgggatgaga	gggaggataa	agccatgtag	ggaggtatct	taccatccct	360
accctaacca	cagtgcacac	aglygacccc	cggctccacg	tacctgaaaa	accagagcct	420
actgactttt	ggatgctctt	ttgggcacag				450

<210> 68

<211> 511

<212> DNA

<213> Homo sapien

<400> 68

aagcctcctg	ccttggaat	ctggagcccc	ttggagctga	gctggacggg	gcayggaggg	60
gctgagaggg	agacccgtct	cctcctgct	gagctgctt	ccccagcayc	cactgctggg	120
cagagcagaa	agccacagag	agacacatgg	agccagagat	ccttagccct	ggagctgagg	180
ctgctctctg	gctgacccgc	tgcctgtacg	tggccagaaa	tggggttggc	atctggcatc	240
catttgaggg	cagggtggag	gaaaggagg	ccaaacaggg	aaaaacctatt	cctgctgtga	300
caacacagcc	cttgctccac	gcagcctaag	lgcaggagag	gtgatgaagt	caggtacgca	360
gtcggggagg	acgaggtaac	tcagcagcna	tctcactctg	tagcctalgc	gttcaatggc	420
caggaggggc	agcaccgcac	agcaccgcac	agccacagag	aglycctctg	caggcaccaa	480
gagagcgatg	atggacttga	gcgcctgttt	c			511

<210> 69

<211> 511

<212> DNA

<213> Homo sapien

<400> 69

gtttggcaga	agacatgttt	aataacattt	tcatatttaa	aaahacacac	aaacattctc	60
laktctctca	ccatcttccc	ttgccttccc	tgggctctga	gcagacaaag	gaaaggtaat	120
gaggttaggg	ccccagggc	ggctaagtgc	tattggcttg	ctcctgctca	aagagagcca	180
tagccagctg	ggcaccggcc	cctagccctt	ccaggttgc	gaggcggcag	cgttggggag	240
gtttcttaet	gagcctgtgg	ctgcagctct	gcaggagaga	cttctgcaac	agcctgggct	300
ctaggggcay	aaagagctga	agcctgaga	acgggagga	aaatccatc	acctccagcc	360
cctccagggc	ttcctcctct	tcttgccctg	ccagtkcacc	tgcagcggg	gctcggggcg	420
ccaggtagtc	agcgttgtag	aagcagccct	ccgagagaag	ctgcgggtca	aatctccccc	480
ctataggagc	ccccggggag	gggtcagcac	c			511

<210> 70

<211> 511

<212> DNA

<213> Homo sapien

<400> 70

caagttagaac	gtcaggettg	gcnnaggttg	agttagagctg	aaaacaaag	tgtgatltatg	60
aagaggtatgt	gagtccttly	ngttagaggag	ngaaaggclly	ttgagcttct	atttcagat	120
acttttacccl	glgnanng	cacattttcc	noctccclct	catggcattt	gtglaaaggtg	180
aglnatgatto	ctattccatc	tgcattttag	aggttaagaa	taacgtacaa	gggattcagt	240
gattagcaag	ggacccctca	ctagaggttg	alhyaggttag	gacagagctc	agctgtttga	300
atctcagagc	ccagggcngct	ggagctggyl	aggatccleg	agctggcact	aatgtgaggt	360
gcatttccctc	caacccaggc	tcagalcggg	aacctlyacgg	tgtgtgccc	cganngggag	420
gcagggctga	gctggcccg	lyngctccct	gchctttca	caacacactc	lccgtttgag	480
gtgcclgggct	gggactactt	cacagagca	a			511

<210> 71

<211> 511

<212> DNA

<213> Homo sapien

<400> 71

tggcclggg	aggattggg	gagaggtagc	tacnnggatg	caglcctttg	ggatgagggc	60
latagggat	gaccccatca	tttccccaga	ggtctgggc	lccctttggtg	ctcagcagct	120
gcccctggag	gagatctggc	ctctcltqng	ttcatccct	gtgcacactc	ctctctggc	180
ctccacgaca	ggcllyclg	atgacacac	cttlyncacg	tgcacgagg	gggtgcclg	240
ggtgactgt	gcccgtggag	ggatcgtgga	cgagggccc	ccgtccggg	ccctgcagtc	300
tggccagtgt	gcccgggctg	cactggagly	gtttacggg	gagccgccac	gggacccggg	360
cttggtggac	catgagaatg	lcllccagctg	tccccaatg	ggtgccagca	ccaaggaggg	420
ccagagccgc	tgctggggng	aatattgctgt	tcagllctgtg	gacatgggha	aggggaatc	480
ctctacgggg	gltgtgagtg	cccaggccct	t			511

<210> 72

<211> 2017

<212> DNA

<213> Homo sapien

<400> 72

agccagctga	ctgagagctg	caagaagaag	lccaggatcat	galgagctcag	tttcccacag	60
agatgaatgg	agggccaaat	atgtgggcl	ttacatctga	aggaagctact	aagcclgntn	120
aacagtttga	taacctcaaa	cccllcnngag	gttacalanc	aggtgatcaa	gcccgtactt	180
ttttccctaca	glcnngtctg	ccggcccccgg	cttlagctga	aatatgggccc	ttatcagatc	240
tgagccagga	tgggaagatg	gaccagcaag	antctctctat	agctatgaaa	ctcatcaagl	300
taagtttga	gggcccacag	ctgccclyag	tcctccclnc	tatcatgaaa	caacccacta	360
tgttctctcc	acclambctct	gtctgttttg	ggalyggag	catgcccaak	ctgtccatto	420
atccgucatt	gctccagttt	gcacctatag	cnacnccctt	gtcltctgct	acttcagggg	480
ccagtattcc	tcctctaatg	atgcccagtc	ccctagtgc	ttctgttagt	acatccctcat	540
tacczaatgg	aatgcccagt	ctcattcagc	cttlctccat	tccttatctt	tcttcaacat	600
tgcctcatgc	atcatcttac	agcctgatga	lccggaggatt	lygtgggtgt	agtatccag	660
agggccagtc	tctgattgat	ttaggalcly	gtagctcaac	ttcctcaact	gcttccctct	720
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aaagctagaa	lccctctctt	cagtcacatc	tcctctcaac	tcagclagct	actatttggg	900
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tcctcccatc	tttcagaggg	ggaaagccag	ttgattctct	taatgggaact	clgacttcat	1080
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aacagagag	actgcaagag	ccagaaatga	agaaagcagct	ggagttggag	aaacgcttgg	1320

agaaacagag	agagctggag	agacagggg	agggagagag	gagagaggag	alagaaagac	1300
gagaggcagc	aaacacggg	cttgagagac	agagccggtt	agagctggga	agactccgtc	1440
ggcagagct	gctcagtcag	aagaccagg	aacaaagaga	cattgtcagg	ctgagctcc	1500
gaaagaaaag	tctccacctg	gaactggag	cagtcagatg	aaaacatcag	cagatctcag	1560
gcagactaca	agctgtccaa	atcagaaagc	aaacacaaa	gactgagcta	gaagttttg	1620
algaacagtg	tgacctggaa	attatggaaa	tcaaacacct	tcaacaaag	cttaaggaa	1680
atcaaaaata	gcttatctal	ctgttccctg	agagccagct	attcaacgaa	agaalacaa	1740
acatgcagcl	agctacacaa	ctgtattcag	gagtcagttt	acttcataaa	agtcacacag	1800
aaagaggaga	attatgcaca	agacttaaa	aaacattag	tgtctttgaa	aaagaaactg	1860
catctaaagt	ctcagaaatg	gaatcattta	acaalcagct	gaaggaaact	agagaaagct	1920
ataatagaca	ggagcttggc	cttgaacaa	lactataaat	caaacctgac	aaatctgagg	1980
aaatcgaaag	aaaaagatta	gagcaaaa	aaaaaa			2017

<210> 73

<211> 414

<212> DNA

<213> Homo sapien

<400> 73

alggagatga	catctccat	ctgagggaac	accttccat	ttcttcagga	ttctctcag	60
tgaagagag	ccccagtg	tgggtgaaa	acactgana	gtaggagag	gagctcaaa	120
taatcagtat	ctcagaggc	tctaagggtg	aaagagctt	cactggacat	ttagtgaca	180
acaaaggcat	actttcggaa	tgggagagtc	aaactttct	aaactctgtc	tctctcagag	240
aaagctgaga	ctcaagagtc	tactgtttta	gtggcagctc	cagaaaaactg	gtgttaccac	300
gnaaaacagg	agcaattaga	aatgggttcc	acttttcaaa	gtcccgcaaa	agagatgtgc	360
tttcttttgc	ccatttaggg	ttcttctctc	ttcttttctc	ttcttctctc	actc	414

<210> 74

<211> 1567

<212> DNA

<213> Homo sapien

<400> 74

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aggtcccaal	algaacag	caatctatc	ttcaagaca	laltagaggt	tgggaaaata	120
attcatgtga	actagacaag	tgtgttaaga	gtglaagta	aaatgcacgt	ggagacaaat	180
gcattcccaag	atctcaggga	ctctcccaag	ctgtccact	ggggagctga	aggaacagat	240
agtgcaalql	ctttgtctct	gaatttttag	ttacatgla	gttaatgttg	ctctgaggaa	300
gcacctggaa	agtttatccc	aacatatcca	calcttatat	tccacaaatt	aagctglaal	360
atgtacccta	agacgtgtgt	aattgaclyr	caactcgcaa	ctcaggggag	gtgtcatttt	420
agtaatgggt	caaalgalic	attttttatg	atgtttccaa	aggtgccttg	gcttctcttc	480
caagctgaca	aatgcaaaag	tggagaaaa	tgatcalat	tttagcataa	acagagcagt	540
gggogacaca	gattttataa	ataaactgag	caacttcttt	ttaacaaaac	aaalgaaggl	600
ttattttca	gatgatgttc	atccgtgact	ggtccaggga	aggacttttc	accttgacta	660
tatgttcatta	tglcatcaca	agctctgagg	cttctccttt	caatcctgcg	tggacagcta	720
agactccagt	tttcaataga	atctagagca	gtgggaccca	gttggggtga	tttgcacccc	780
catctccggg	ggaatgtctg	aagacaattt	tglcatctca	atgagggagt	ggaggaaggl	840
acagtgtctac	taccaactag	tggataaag	ccagggatgc	tglcatcact	actaccatgt	900
acaggaagtc	tcccaatttc	aaclacccaa	tccgaagtgl	caactgtgtc	aggactaaga	960
aaactgtgll	ttgaatagaa	aaagggcctg	aaagggggga	gccaacaaat	ctgtctgctt	1020
ctctacatta	gtcattggca	aataagcatt	clgtctcttt	ggctgctgce	tcagacacag	1080
gaqccagaa	tctatcgggc	accaggataa	catctctcag	tgaacagagt	tgaacagagc	1140
tatgggaaat	gctgtatggg	attatcttca	gtttgtttag	cttctaagtl	lcttctccctt	1200
cattctaccc	tgcagaccaa	gttctgtan	agaaatgcct	gagttctagc	tcagggttttc	1260
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atataccttc catgaagcac acacagactt ttgaagacaa ggacaabnac tgcctgactt	1380
gaggccttga ggaatgaagc tllqaaaggaa aagaatactt tgtttccagc cccattccca	1440
cactcttcaat ghyttaacaa ctgccttccct ggaaccttga ggcacgggtga cagtattaca	1500
tattgttata gannaactgat tttagaglik tgatcgtlca agagaatgal taaatataca	1560
tttcta	1567

<210> 75

<211> 240

<212> DNA

<213> Homo sapien

<400> 75

tcggagggag gcccgggcag gtccltcagc cttggactgt gtcacactgc caggcttcca	60
gggtcccaac ttgcagucgg cctgtttgtgg gacagtctct gtaatcgcga angcaaccat	120
ggaagacctg ggggaacaca caatggtttt akcncacctg agatctttga acaacttcat	180
ctctcagcgt gcgaggggag gctctggact gcatatttct acctcggccg cgaaccagct	240

<210> 76

<211> 330

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (330)

<223> n = A, T, C or G

<400> 76

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ggtgggtgaa gatggctcc cctccgggtgg ctccccatc tttctctggc ctgaagcagg	120
tcagcctgca gccagagtaa agagggccaa caatgggtgt cttgaacagg ggctttagca	180
ggccttgaag gcccctctct gtagtgllca acitcctgga gccaggccac atgttctcct	240
calamgcag gytanynabg qtracgttga gggtagacta gtattmangr agelgqclng	300
carcctgcc cgggaggccg ctosaaatcc	330

<210> 77

<211> 361

<212> DNA

<213> Homo sapien

<400> 77

agcgtggtcg cggccgaggt gtctttcagc gtctgtttat ggccttgttc aagaacacca	60
gtctcagctc tctglactct ggttgcaaac tgaccttgc caggcctgag aaggalgggg	120
cagccacacg agtggatgct gtctgcaccc atcglactga ccccaaaagc cctggactgg	180
acagagagcg gctgtactgg aagctgagcc agctgcacca cggccttact gagctgggoc	240
cctacacccct ggacagggaac agtctctatg tcaatggttt caccacatcg agctctgtac	300
ccaccacacg caccgggggtg gtcagucagq agccattcaa cctgcacagg cggccgctcg	360

a

361

<210> 78

<211> 356

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature
 <222> (1)...(356)
 <223> n = A,T,C or G

<400> 78

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actgaacttc	accatcaaca	actggggta	tgaggagaa	atgagcacc	ctggctccag	120
gaagttcaac	acacgggaga	gggtccttca	gggctgctca	aggtccctgt	tcaagagcac	180
cagttttggc	cctctgtact	ctggttgag	actgactttg	ctcagacttg	agaaacatgg	240
ggcagccact	ggagtggagc	ccctctgcac	ccttggcctt	gatacgcctg	gtcctggact	300
ggacagagag	cgggtctact	gggagctgag	ccagtctctc	ggcgngacn	ccnctt	356

<210> 79
 <211> 226
 <212> DNA
 <213> Homo sapien

<400> 79

agcgtggtcg	cggccgaggt	ccagtgcac	catgctctt	ctcctgcac	ctggcacagt	60
gaggaagatc	tctgctgtca	gtgagagggc	tgctatcac	tgagatggca	gtcaaaagtg	120
catttaatac	acctacagta	tgaacatca	tgctttggcc	cagggtatct	catatgtgtc	180
cagagcactt	acatacctt	gcagacctgc	cggggggccc	gctcga		226

<210> 80
 <211> 444
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(444)
 <223> n = A,T,C or G

<400> 80

tggtgtgttg	aacttcttgg	agncagggtg	acccctgtcc	tcccaaat	gcaggtttgt	60
galtgtgaag	ttgagggtga	atggtaacag	gagagggtca	gcagccataa	ttgtggtgck	120
gsmgmasgag	gmwggwtgty	cwgagtttcc	xxxtccct	gtggagggtc	caggaggtct	180
ggtggtgggc	acagaggtct	gatgggtgaa	acattgaca	tagagactgt	tctgtccag	240
gggtgtgggg	cccagctctt	yratgycatt	ggycagtttg	ctyagctccc	agtacagctc	300
ctctckgyyg	mgwccagagc	llllggggtc	agatgcttg	atgcagatgg	cttccactcc	360
agtggctgct	ccalctttct	cggacctgag	agagttcagt	ctgcagccag	agtacagagg	420
gccaaacclg	gtgtcttttg	aata				444

<210> 81
 <211> 310
 <212> DNA
 <213> Homo sapien

<400> 81

ttagagggcc	gcccgggcag	gltaggaagc	acattgtctc	tagagccact	gctccttggc	60
ttccacctgt	gtctcgggca	tctccaggga	gtgcaggaag	gaagcagglt	caactgtcca	120
gaccagtcag	actgtctgtt	ctcagttctc	acctgagcaa	ggtcagltct	cagccagagt	180
acagagggcc	caactgtgtg	ttcttgaaca	aggtcttgag	cagaccttgc	agaacctctc	240
tcgttggtgt	tgaacttctt	ggaaacccag	gtgttgcatg	tttctctcca	taattgcaag	300
ttggtgatgg						310

<210> 82
 <211> 571
 <212> DNA
 <213> Homo sapien

 <220>
 <221> misc_feature
 <222> (1)...(571)
 <223> n = A,T,C or G

<400> 82
 acggtttcaa tggacaattt tattgtttac ttaattggatc atcaal.tttg tctcentacc 60
 tacaaatgga atttcatctt gtttccalys tgagttagtga aaatgtgaca aagctaatca 120
 laataacola catcaaaaag gaaataagct aacactgttc actttctttt taaacaggcaa 180
 aatataaata tatqaactct anaatgcaca atggllttagt caataaaaaa ttcaaatggg 240
 atcttgaaga atgtatgcaa atccagggtg caagtgaagat gagctgagal. qctgtgcaac 300
 tgtttaaggg ttcttggcac tgcattctct. nccactagc tgaatcttg. catggaaggt 360
 tttaagclaat gccaagtggg gatlcccaann atgctaagti. qacttcaggg ctgtgcacag 420
 qanctaaaag gcaggnaagt actaaatatt gctgaagaca tccacccacg gaaggacttt 480
 accttccagg agctccaaac tggcaccacc tccagtgctc acatggctga cl.ttatcttc 540
 cgl.tlccal. ttggacacag. aaqltggcgt g 571

<210> 83
 <211> 551
 <212> DNA
 <213> Homo sapien

<400> 83
 aaggtctgtg qgtttttgat ccigtctggag aacctccagt ttcatgttga ggaagaaggg 60
 aagggaaaag atgcttcttg gaacaagggt aaagccagag cagccaaat agaagctt.c 120
 cgaacttcac ttccaaagcl. aggggatgtc intgtcaatg atgttllly. caatgctcnc 180
 aagcccccac gctccatggt aggagtcaat ctgcacacaa aggtctggtg gtttttgatg 240
 aagaaggagc tgaactactt tgcaaggccc clunagagcc cagagcgacc ctctctggcc 300
 atcttggggc gagclaaayl. lguayucacg atccagctca tcaatlaabst qctggacana 360
 gtcuatgaga tttttatttg tgggtgaatg gctttlaant tctttaaggt gctcaacaac 420
 atggagattg gaacttctct gtttgatgaa gagggaqcca agattgtcaa agacctaaag 480
 tccaaagctg agaagaatgg tgtgaagali. accttgcttg ttgaactllyt. caatgctgac 540
 aagtttgalg a 551

<210> 84
 <211> 571
 <212> DNA
 <213> Homo sapien

<400> 84
 tttgttccct acal.tl.tlct aaggaattac ttaaatcagc caatgtgtct ttgagactct 60
 taagllclly. tlccaaactta gctaatccat tctgagaaat gtggtatagg tggcgtgtct 120
 cl.tl.tl.tlct qgacaaaagt tctttgtttt cccctgttag agtatcacag acctlctgcl 180
 gaaqctggac ctctgtcttg gcttggact cccaaatctg ctgttcaltg tcaagclly. tcttttagaa 240
 aatgtlaat cttaattct tccatattgg tggacatctg tctaagllly. tcttttagaa 300
 caatgcaatt atcttctttg agtctaatlt ctctctctt. gcttggact. gctcaactaa 360
 acttctctct caatttctla gcttctctta tcaactgtr. agatcaatcc tggagggaag 420
 acatgtctcl. agtaaaaggt gcaagctggg tcaagtaact gtccaaagtt tcttgaaylt 480
 gctgaacttc ctgtctttt. ttgttcaaaag taaactgaat ctctccaaat gcttcttcca 540

agtggacttt ttctctgcgc aaagcatcna g

571

<210> 85
 <211> 561
 <212> DNA
 <213> Homo sapien

<400> 85

tcattgootg	tgatggcatc	tggaatgtga	tygncagcca	ggaaqgttga	gatttcatte	60
aatcaaagga	ttcagcatgt	ggtggaagcl	qtgaggcaag	ynnaacaaga	actgtatggc	120
aagttaagaa	gcacagaggc	aaaamunag	gagacagaa	agcagttgc	ggaagctgag	180
caagaaatgg	aggaatatga	agaaagatg	agaaatgttg	ctaaslitaa	acagcagaaa	240
atcctagagc	tggagaaga	gaatgaccgg	cttggggcag	aggtgcaccc	tytgggagat	300
acmgttaaa	agtgtatgga	aacacLkett	tcttccaaLg	ccngcatgaa	gyaagaactt	360
gaaagggtea	aatgqaaqta	tgaacccttt	tctaagaaqt	ttcagttctt	aatgtctgag	420
aaagactctc	taagtgaaga	ggttcaagat	tlavagcate	agatagaaag	taatgtatct	480
aaacaagcta	acctagaggc	caccgagaaa	catgataacc	aaacpaaatgt	cactgaagag	540
ggaaacaaagt	clalancagg	L				561

<210> 86
 <211> 795
 <212> DNA
 <213> Homo sapien

<400> 86

nagccantaa	tcnccattta	ttacttaaca	tatgcnaacc	actgtacttg	gcagtlccaa	60
aattctcacc	gttacaaaca	cccatgagg	talLtattee	cattctakaa	ataggggaaac	120
cacagclcaa	qlaaqllagg	aaanlgaguc	aagtatacac	agaaatacga	gtggcaaaac	180
tagaaggaaa	gaatgacact	getatctget	ggcctnaagt	gtcctggctc	tlLlcaacag	240
ggttcaatgt	ctccagcgct	getgtctgtg	clgaattacc	atgcclLcalt	tgtttttctt	300
actclggcyl	lcaactgccl	actlcaaaq	atctaactca	llcnaagagac	cacttatttc	360
tttctctctt	tctnaaatta	cttttaatan	ttcttcaltg	gggggaaaag	aagatgcttg	420
ttggtagttt	tgttgtttta	gotgtctaac	ttgggaatta	aacaatttgt	ttLcatcttg	480
tacatcctgt	aacagctgtg	tttgtctaga	aaqctnctc	tcctctclL	ltaqcatggc	540
ttclaaactc	llcaallcacl	lllccclllc	ttcaacaca	alctcaagtt	cttcaaaactg	600
tgatgcagaa	gaggcctctt	tcaagttatg	ttgtgclact	tcctgaacat	gtgcltttaa	660
agattcattt	tcttcttgaa	gatctgttaa	ccacttccct	gtalLlycta	ggctcttctc	720
tttclclLac	aaaaagagcl	lcalgylact	catctgttcc	lcttttccct	ttataaagtt	780
caggagcttc	agaac					795

<210> 87
 <211> 594
 <212> DNA
 <213> Homo sapien

<400> 87

csagcltttt	tttllLllll	aaasagllgh	agcattaatg	llttattgtc	acgcagatgg	60
caactgggcl	latgtcttcc	tatLtttat	ttttgtaash	taaaaaaatt	acaagtttta	120
aatagccaat	ggctggttat	attttcagaa	aacalggtta	gactaattca	llaaLgylgg	180
cttcaagctt	ttccttattg	gotccagaaa	altcaccac	cttltLklcc	ttcttnaaaa	240
actggaatgt	tggcaLgcat	ttgacttca	actctgaagc	cccatcctga	cagtcattcca	300
caclclacclL	aggaatatc	acgltggcat	acttttLaga	gagggaaatga	aagaaaggct	360
tgatcatttt	gcaaggccca	caccnctgg	ctgagaaagtc	aactactaca	agtlLlclac	420
ctgcagcgtc	caaggtctcc	tgaaaagcag	ttttgtctct	gatctgttLc	acactctttg	480
ctgtctggagt	clgacagagcg	gctgttaagg	ccgatggaaa	tggatccaaa	gcacccnaca	540

gagcttccaa actcgcctgct tggcttgaat. tgggaccca catcgccatg gct 594

<210> 88
 <211> 557
 <212> DNA
 <213> Homo sapien

<400> 88
 aagtgttagc attaatgttt. lctgttcacg cagatgggaa ctgggtttat gctttcatat 60
 tttatntttt tgttaattta aaaaattmca agttttaaat agccaalqnc tggttatatc 120
 ttcagaaaac atgattagac taattcalka atgggtggctt caggttttc cttatttqct 180
 ccagaaattt caccacattt. ttgtcccttc ttaaaaact ggaatgttgg catgcatttg 240
 ccttcacact ctgaagcacc atcctgacag tcttcacat ctacttcacg gaatatcacg 300
 ttggataact tttcagagag ggaatgaagc aagggttga tcattttga aggcacacac 360
 cactgtggtg agaagtcaac tacttcaagt ttatcaccty cagcgtccaa ggcctcatga 420
 aaagcattct. tgcctcagat ctgcctcacc atcttgccty ctggagtcty accagcggct 480
 gtaaggaccc atggaatg atccaaagca ccaaaacagc ctccaagact. cgtgcttgg 540
 catgaattcg gatccga 557

<210> 89
 <211> 561
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> {1}...{561}
 <223> n = A,T,C or G

<400> 89
 tacaaacttc attgaaacgc acacgcgcac acacacacac acccctgtgg alaqggaaa 60
 gcactgtgcr acagggtcca ctgaacagat gaggggatgg cagctkqta tgtggctttt 120
 gccacacccr ncttctgaca ggggaaggct tagattgagg cccacacccc catgggtgatg 180
 gggagctcag aatggggtcc agggagaatt tgggttgggg gaggtgctag ggaagcattg 240
 gcagagggca cctccgagt ggggccccga gggctgcaga gtcttcattc ctgtccctca 300
 cagcagcgtt ctcaggtctg gttccctcaa agggggctcc cagcaggggg cctccctggc 360
 ccaaacattc gtacccctgg ctgcgcagcg gaagcagccc ggaacagcag ggcgcagatc 420
 agcacaacag acgcctctgg ggtagggaca gcaggtccac cctgtctggt tgtctcagga 480
 gcaggtctgg ttatcatggc agaagtgttc tccacacact tcaagtcctk. caccacacac 540
 tganygttac nggcagggaa g 561

<210> 90
 <211> 561
 <212> DNA
 <213> Homo sapien

<400> 90
 cccgtgggtg ccatccacgg agttgttacc lcatctttgg aagcaggatc gacagctctac 60
 actgcagtgg aagccccgtg ggcagcagly atggccatcc ccgcacgaa aggcctctgg 120
 gaaggggcag caactggaag tccctgagac ggtaaagatg cagggcttgc cggcagagca 180
 gtaggcatc. aactggcagc ggcaccccag atgcctgctc aatgtttgtg gccatttgtc 240
 cagaaagggc cggcagcagc tgtagctggc tccctcaggg tccaggcagc aggcacaggy 300
 gcagaaatga ccatctgggc accgcgttc. agccacacag cctgctgtta aggcacaccc 360
 gtcacacagg gtcacacagg tctgctctgg tccgactccg cggctcttgg gccctgatgg 420
 ttctacclgc tgtgagctgc. ccaagtgagaa gtatggctgc tgcacacgac caacgcacac 480

tgtgtgtctcgt atcaccctgca ctgtctgccc: aagacactgc ntgtgacctg atccagayta 540
agtgcctctc caagagagaac g 561

<210> 91
<211> 541
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1) ... (541)
<223> n = A, T, C or G

<400> 91
gaatcacctt tctggttttag ctagtacttl gtacagaaac atgaggtttc ccaacagcga 60
gtctccctgg gctctgtttg gctctcctga aggcaggcct acaccttttc ctctctctta 120
tggagagggg actctgctct aggtgaaaa gtccctcttc aagagtgaag aagggattcg 180
attgctgctt caggactgtg gaattatttg gaattgttta caaatngttg ctacaaaaaa 240
acaaaaaagg taattacaaa atgtglaaat cacaacatga ttttraaaga catlctgcat 300
tgtgctcaca ttccctttaa tltgttttc aaagtgctc agcccttagc ccagctggat 360
tcttccggga aggcagaga cagtttgccg aaaaatgac agggagagga ggggtggta 420
aaggagaaag cagccttcca gtaaaagac agcctcagt taaaggtcag ctcccgaaa 480
gctggcctca ngcggagctt gggctcagaa gaggagcaga agcagggttg gactcggagc 540
t 561

<210> 92
<211> 551
<212> DNA
<213> Homo sapien

<400> 92
aacccgagcg cagacagtag ctgggtgggc accatggctg ggtacaccac caccagggcg 60
gtgaagcgca agatccaggc tctgctcctg caggcagatg atgcagagga cgcagctcag 120
cgctcctcag gggggtttga tggagaaaa cgggcccggg aacaggctga ggttgaagtq 180
gctctctga accgtaggat ccagctgggt ggggagagag tggacctgta tcaggagcgc 240
ctggccactg cctgcacaaa gctgggaagg gctgaaaaa ctgctgatga gaggcagaga 300
ggtatgaagg tctctgaaa ccgggcctta aaagatgag aaaagatgga acttccggga 360
atccacctca aagangctaa gcacattgca gaaagggcag ataggaagta tgaagaggtg 420
gctcgtaatg tggtagatcat tgaaggagac ttggaacgca cagaggaacg agctgagctg 480
gcagagtcct gttgcagaga gctggagag cagattagaa tgatggacca gaacctgaag 540
tgtctgagtg c 561

<210> 93
<211> 531
<212> DNA
<213> Homo sapien

<400> 93
gagaacttgg cttttattgt gggcccaggg gggcacaagg gtccaggaggc ccaaggaggg 60
gatctggttt tctggctagc caggctcatg catgggctac agtaggaatc cgtctglaagt 120
gcaacagcct caattgctgc agttccgggg agaacacctg cactgcatgg ctttgatgac 180
ctcgtggtac acgacagagc cattggtgca gtgcaagggc accgcctatg gctccgtcct 240
cgagggcagg cagcaggagc attgctcctc cacatcctcg atgctcatgg agtacacagc 300
tttgctggca ccttttccct ggcagctatg aatgtccact tctcttggg acttacaalc 360
tcccctttt atgtactgca ccttggctgt gatgctttt caatcaggct cctcacctgt 420


```
gtcaacagcaq gtguckggan ttttcacgat ttgcccctct tcagccnagc acttgknttc 480
atcaantggt gggcagcccg tgacccctct ctccnagatg tactctctct t 531
```

```
<210> 94
<211> 531
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(531)
<223> n = A, T, C or G
```

```
<400> 94
gcttgagact tgcgggacat gtgccacacn gtgacttger kggcaaatgg ccagaccttg 60
ctgcagagtc atcgtgtcaa ttgtgacccat ggaccccggc cttcatgtgc caacagccag 120
tctctgttcc ggggtggagga gantgtgtgc tgcgctgga cctgcccttg tgtgtgacg 180
ggcagttcaa ctggcccat cgtcaccttc galungcaga atttcnagct tactggtagc 240
tgtctctatg tcatctttca aaacaaggag uaggacctgg ngtgctctct ccacaaaggg 300
gcttgacgac ccggggcaca acanynctgc atgaaglcga ttgagattaa qcatgctggc 360
gtctgtgctg agctgtgccc taacatggag atggtggtgg atgggagact ggtccttgcc 420
ccgtacgttg gtgaaaacat ggaagtcagc atccacggcg ctatcatgta tgaaglcagg 480
tttaccatc ttggccacat ntkccntac accgcncaa aacaacgagc t 531
```

```
<210> 95
<211> 605
<212> DNA
<213> Homo sapien
```

```
<400> 95
agatcaacat ctgctggtca ggagggaatgc ctctcttgtc ttggatcttt gctttgaagt 60
tctcgatagt tccaactkkr ytaranskma ngkgyratgr wnttksywqw rasytkmwwm 120
rsgraraytt agacaycccm cclwagagac gtagkacmr gtgcagaggt ggacLntttc 180
tggtgtgtgt agltagagca ggtggtgtca tcttccagct gtttccagc aaagatcanc 240
ctctnctgat caggagggat gccttcccta lcttgatct ttgctttgac attctcgatg 300
gtgtcaactgg gctccacctc gagggtgahg ntctaccag kcaaggtctt cactgaagaty 360
tgcctcccaac ctctgagagc gggagccagg tgcaggglrn actctttctg galgkntag 420
tcagacaggy tgcgymcal ttccagctgc ttccnagca aagatcaacc tctgctggtc 480
aggaggrahg ccttcttgt cytggtatct tgyttgaer ttctcratgg tgctacctgg 540
ctccacttcg agagtgatgg tcttaccagl cagggtcttc accnagatct gcattccacc 600
tctaa 605
```

```
<210> 96
<211> 531
<212> DNA
<213> Homo sapien
```

```
<400> 96
aagtcncaaa cagacaagga ttattccnag ctgcaagcln ttttagaagc tgaacgagga 60
gacagaggtc atgaltctga gatgattnga gacnttcaag ctogaattac atctttacaa 120
gaggaggtga ncatctcaa acataatctc gannagttgg aaggagagag aaaaagaggt 180
caagatctgc ttaatcactc agaaaaggaa caagataatt luyagatnga tttaaactac 240
aaacttanat cattacaaca acggttagaa caagaggtan atnaccacaa agtaaccaan 300
gctcgtttaa ctgacaaaca tcaatctatt gaagagagaa ngtctgtggc atgkktgag 360
atggaaaaaa agctgagaga agaaagagaa gclungaga aggttgaaaa luyggttgtt 420
```

```

engattgaga aacagtgttc catgctagac gctgacttga agcaatctca gcagaaacct 480
gaacatttga ctggagctaa agaaaggatg gaggatgag ttaagaattct a 531

```

```

<210> 97
<211> 1017
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1) ... (1017)
<223> n = A, T, C or G

```

```

<400> 97
agctccacac atgtccatca gggtagccca gaagtccatc aaggtagtcca cctctggccc 60
ccgggccttc agcagccgct cctacacgag tgggcccgtt lcccgcatca gclctctgag 120
cttctcccca gtgggcagca gcaactttcg cggtagccca ggcgggggct ctggtggggc 180
cagcgggctg ggagggctca ccgagttac ggtcaaccag agcctgctga gcccccttgt 240
cttgagggtg gaccccaaca tccaggccgt ggtcaccacg gagaagagac agatcaagac 300
cctcaacaac aagttttgct ccttcataga caaggtacgg tccctggagc agcagagcaa 360
gatgctggag acaagtgga gctccttcca gcagcagagc ccggtctgaa gcaacatgga 420
caacclgttc gggggtctca tcaacaccc tggggtggag ctggagacac tgggcccagg 480
gaagctgaag ctggaggcgg agcttgagca catgacgggg ctggtggagg acttcagaga 540
caagtatgag gatgagatca ataacgcttc agagatggag aacgaatttg lccctatcaa 600
gaaggatglt gctgaagctt acatgaacaa ggtagagctg gagtctcgcc tgggaaggct 660
gacgcagcag atcaacttcc tcaggcagct gtatgaagag ggaatccggg agctgcagtc 720
ccagatctcg gacacatctg tgggtgtgtc catggacacc agccgctccc lggacatgga 780
ccgactcatt gctgagggtc aggcacagta cggagatatt gccaaacgca gcggggtga 840
ggctgagagc atgtaccagg tcaagtalga gtagctgacg agcctggctg ggaagcagcg 900
ggatgacctg ggagcagaca agactgagat ctctgagatg aaccgggaac atcagcagcg 960
ctncaagctg atattgagg cctcaaaagg cagagggctt acctggagga cggccat 1017

```

```

<210> 98
<211> 561
<212> DNA
<213> Homo sapien

```

```

<400> 98
cccgaggcca gctaacgagc ggaatatggc agacattttc tgcctccatg atggtttatc 60
lgggtctgga aacccaaacc ctcaaggatg gcttgggcca tgggggagac agcctgctgg 120
ggcagggggc taccagggg cttcctatcc tggggcctac cccgggcagg caaccccagg 180
ggcttatcct ggacagggac ctccaggggc ctacccctga gcaactggag cttatccagg 240
agcaccctga cctgggtctt aaccagggcc aaccaggggc cctggggcct acatctctc 300
tggagcggga agtgcacccg gagcctaccc tgcacctggc ccttatggcg cccctgctgg 360
gcaactgatt gtgccttata acctgccttt gcttggggga gtcgctgctc gcatgctgat 420
aacaattctg ggcacgggtg agcccaattg aacagaaatl gtttttagatt tccaaagagg 480
gaatgatgtt gcatctactt ttaacccnag cttcaalagc aacaacagga ggtgcatctg 540
ttgcactaun aagctggata a
561

```

```

<210> 99
<211> 636
<212> DNA
<213> Homo sapien

```

```

<400> 99

```

gggaatgcaa	caactttact	gaagaggaaag	tgcattgaaa	tttgttgaaa	ccttaaaagg	60
ggaaacttag	acaccccccc	tcragcgmag	kaccarginc	araggfegac	tctttctbga	120
tgttgtagcc	agacagggtt	cgwccatctt	ccagclgttt	ycerqcaaag	atcaacctct	180
gclhateagg	aggratgcct	tctttatctt	ggatctttgc	cttgacattc	ccgatcgtgt	240
caatgggtct	caactcgagg	qtgatgggtc	kaccagtcag	qgtcttcacg	aaatytgca	300
tccacactct	gagagggagc	accaggtgca	gggttgactc	ttcttggatg	ttgtagtcaq	360
acaggggtgc	yccatcttcc	agctgccttc	csagcnaaga	tcaactcttg	ctggfcaqna	420
qgratgcott	ccttgctcyt	gatctttgcy	ttgactttct	caatgggtgc	actcgggtcc	480
acttcgagag	tgatcgtctt	accagtcagg	gcttcacaga	agatctgcct	cccaactcta	540
agacggagca	ccaggtgcag	ggtggactct	ttctggatgg	ttgtagtcaq	acaggggtgc	600
tccatcttcc	agctgtttcc	cagcnaagat	caacct			636

<210> 100

<211> 697

<212> DNA

<213> Homo sapien

<400> 100

aggttgatct	ttgclgggaa	aaagctggaa	galhgacgca	ccttgtctga	ctacnccat	60
ccagaaagag	tccacctgc	acctgggtgc	cctctttaga	qgtgggatgc	aatctctcgt	120
qagacccctg	actggtaaga	ccalcactct	cgaagfagag	ccagfagaca	ccattgagaa	180
ygtcaargca	aaagkccatg	aaaggaagg	calyccctct	gacccgcaga	ggttgclctt	240
cgctsggaaa	gcagctggaa	gatggggcca	ccttgtctga	ctccaacatc	caqaaagagt	300
cyacctgca	cctgggtgct	cgtclgagag	gtgggagaca	ratcttcgtg	aagacctga	360
ctggtaagac	cattacccttc	qaggtggagc	ccagtgcac	calccagant	gtcaaggcaa	420
agctccnnyy	taagggaagg	atccctctct	alcagcagag	gttgatcttt	gclgggaaac	480
agctggaaga	tggacgcacc	ctgtctgact	ccaacatcca	gaaagagtc	acctytgcac	540
ytggtmetbc	gtctyagagg	kqggtfgcaa	atctwmqtkw	agacacbvaa	tkkyaagzyy	600
atcamcmwtg	akklcpakys	cactkwact	wtcrakaamg	tyrwwgcawa	gatecmagac	660
aaggaaagca	ttctctctga	ccagcagagg	tcatct			697

<210> 101

<211> 451

<212> DNA

<213> Homo sapien

<400> 101

atggaghtct	actctgtcga	ccaggtctga	gcctgtgcl	qcgatatcgg	ctcaclgaaa	60
lctccacttc	ctgggttcaa	gcgacccctc	tgcctcagcc	tcccgagtag	clgggactac	120
agcgaggcgt	caccataatt	lclglatttt	tagtagagac	atggttlhgc	catgttggt	180
gggtgtgtct	cgaacccctc	acctcaagt	atclgcctct	gcclcccana	gtgttgggat	240
tacaggcgaa	agccaaagct	ccggccagg	gaacaacttt	agantgaagg	aatatgcac	300
aaqaacatca	catcaaggat	caattaattc	ccatctatta	attactatat	ghgggtcatt	360
atgaactattt	cccaagcaki	clacgttgac	tgtclgagaa	gatgttlgtc	ctgcattggt	420
gagagtggag	aaaggccagg	attottaggt	t			451

<210> 102

<211> 571

<212> DNA

<213> Homo sapien

<400> 102

agcgcggtct	tcgggcgcga	gaangctgaa	ggtgatctgg	ccgcctcaca	ccgacgcac	60
cagctcgctg	agagggagtc	ggacagggtc	cagynacgac	tggccaggcc	cctgcagaag	120
ctggaggggg	cagaaaaagc	tgcagatgag	agtgcagagag	gaatgaaggt	galagaaayc	180

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egggeaatga aggatgagga gaaqatggag attcaggaga tgcagotcaa agaggccaag      240
aacattgcaq aagagagctga ccgcaaatac gaggaagtag ctcgtaagct ggctcatctg      300
gagggtagag tggagagggc agaggagcgt gcaggaggtgt ctgsactaaa atgtggtgac      360
ctggaagaag aactcaagaa tgttactaac aatctgaaat ctctggaggg tgcactctga      420
aagtattckg aaaaaggagg acaatatgaa gaagaatta aactctgtc lgaacaactg      480
aaagaggctg agaccogtgc tgaatttgca gagaqaacgg ttgcaaaact ngaaaagaca      540
attgatgacc tggagagaga acttgcccaag c

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<210> 103

<211> 451

<212> DNA

<213> Homo sapien

<400> 103

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gtgcacaggc cccatttatc gtagaanta ataataatta caatgatgaa tagctcttct      60
taaattacaa aacagaaacc acaagaagg aagaggaaaa acccagggac ttccaaaggt      120
gagctctgac cctcctcctt gccacctctc caagctcatt agtctccttg aaaggagcag      180
aggactcaag ggggactcag clcgaagggc cctgggctga agcggglgag gcagagagtc      240
ctgaggccac agagctgggc aacctgagcc gctctctctg cccctccccc caccactgcc      300
caaacclgct tacagcactc tcgcccctcc cctctcaaac cgtccatcca ctclgcactl      360
cccaggcagg tgggtcgggc agggctcagg catactcttg ggcygggglk tgggtgagca      420
aggcacagtc ccagaggtga tatcaggcc t

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<210> 104

<211> 441

<212> DNA

<213> Homo sapien

<400> 104

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gcagggaact ggtctgtca cacttgctgg cttagccttc aggaactggt ttatctcttg      60
actcagcttg caaaggctga clclgagaa gttaaagtcg tcccagagcc ttggaatcct      120
acggccccc aagccggatc cctcagcct tccaggcctt caactcccg lggagctgaa      180
caatggcctc catggggcta caggtaatgg gcatecgctt ggagctcttg ggtctgcttg      240
cgtcatgtgt gtgtctgcgc ctgcccattt ggccgglgag ggtcttcttc ggcagcaaca      300
llglcaactc gcagaccatc tgggaggggc tatggatgaa ctgctggttg cagagcaccg      360
gcagatgaca gtagaaggtg laagactcgc tgcctggcact gccgcaggac ctgagagcgg      420
cccgccctt cgtcatcct a

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<210> 105

<211> 509

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (509)

<223> n = A, T, C or G

<400> 105

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tgcaaaaggg acacaggggc tcaaaaataa caattttctt tcccctccc caaacctgta      60
ccccagctcc ccgaacacaa ccccttctt cccccgggga aagcaagaag yagcaagtyt      120
ggcatctgca gctgggaaga gagaggccgg ggaggtgctg agctcagctg tggctctttt      180
ccaaatataa atactgtgtt cagaactgga aaactcctca gaccccacca ccaagcaact      240
ctccgttttc tgcgggtgtt tggagagggc cggggggcag gggcgccagg caccggctgg      300
ctgcggtclh ctgnatccgc tgggtgtgca ccccgcgagc ctctgtctgc tcattgtaga      360

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aggaatgaca	ctcgggggla	ccccggatgg	tgggggctcc	ctggatcaga	ttccccgtgt	420
tgggggtcac	acaccagcac	tccccacgt	gcgggttcag	agacatcttg	cactgtlctg	480
ggttgtacag	gccatgcttg	tcacaghtg				509

<210> 106

<211> 571

<212> DNA

<213> Homo sapien

<400> 106

gggttgcagg	gactggttct	ttatttcaaa	nagacaacttg	hcaatattca	gtatcaaaac	60
agttgcacta	ttgattttct	ttttcccaaa	tgggccccaa	agagaccaca	lcaaaaggaga	120
gtacatttta	agccaataag	ctgcaggatg	tacacctaac	agacctctta	gaaacottac	180
cagaaaatgg	ggactgggla	gggaaggaaa	cttaaaagat	caacaaactg	ccagcccaag	240
gactgcagag	gctgtccacg	ccngatgggg	tggccaggtt	gcacaaacc	caaaagcnaag	300
tttcaaaata	atataaaatt	taaaaagttt	tglacctcag	ctattcaaga	tttctccagc	360
actgtctgat	acaaagcaca	attgagatgg	caattctaga	gcacacagct	tcaaacccag	420
aaaagggtga	tgaatgttgt	ttaccatggc	taaatcagtg	gcnaaaacac	agtcctcttt	480
ctttctttct	ttcaaggagg	caggaaagca	attaaghtgt	caactcaaca	lcaagggggac	540
atgatccatt	ctgtaagcag	ttgtgaaggg				571

<210> 107

<211> 555

<212> DNA

<213> Homo sapien

<400> 107

caggaacccg	agcgcagaca	gtactctggg	gggcaccatg	gctgggatca	ccaccatcga	60
ggcgggtgaag	cgcagatccc	aggttctgca	gcagcagaca	gatgatgcag	aggagcagac	120
tgagcgcttc	cagcgagaag	ttgagggaga	aaagcaggcc	cgggaacacg	ctggagctga	180
ggtggcctcc	lctgacccga	ggatccagct	gnttgaagaa	gagclggacc	gtgctcagga	240
gcgcctggcc	actgcctgac	aaagcttnga	agaagctgaa	aaagctgctg	atgagagtga	300
gagaggtatg	aaggtttatt	aaaacccggc	cttaaaagac	aaagaaaaga	tggaaactca	360
ggaaatccaa	ctcaaaagag	ctaagcacat	tgcaagaaag	gcagataggc	agtatgaaga	420
ggtggctcgt	aagtttgtga	tcattgaagg	aaacttggaa	cgcacagcgg	aaagagctga	480
gclggcagag	lctgagctga	gagcagctgg	ctgacagatt	agaclycttg	aaacgaacct	540
aaagtgtctg	agtgcc					555

<210> 108

<211> 541

<212> DNA

<213> Homo sapien

<400> 108

atctacgtca	tcaatcaggc	tggagacacc	atgtlcaate	gagetaagct	gtcgaatatt	60
ggctttccag	aggtcttgaa	ggactatgat	lcaactgtct	ttgtgtlcaag	lcatgaggag	120
ctcattccga	lcaagagacc	taalgcctac	aggtgttttt	cgcagccacg	gcacatttct	180
gttgcaacgg	acaagttcgg	gtttagcctg	ccatatgllc	agtatttttg	aggtgtctct	240
gctctcagta	aacaacagtt	tcttgccatc	aatggattcc	ctaataatta	tlgggggttg	300
ggaggagcag	atgacgacat	ttttaacaga	lcaattcata	aaggcaatgc	tatatccact	360
ccaaatgctg	tatgagggag	gtgtcgaaat	atccggcatt	caagagacaa	gaaaaatgag	420
cccaatccct	agaggtttga	acgggtctcca	catacaagag	aaacgatggc	cttcgatggt	480
ttgaactcac	ttacctccan	gtgtgttgat	gtcagagata	ccctttatat	acccaaatca	540
c						541

<210> 109
 <211> 411
 <212> DNA
 <213> Homo sapien

<400> 109
 ctgacacctt aattaaaagg cacaatcatg ctggggaatg aacagtcctg ccccgagggc 60
 cacagcgaat ttttggggaag gaggcaaaag gttgagaagg gaaaggaaaag aaggaaaggaa 120
 ggggaacant aagaactgga gacgttgggt gggtcagggg gtgtggtgga ggttcggaga 180
 gatggtaaac aaacctgact gctatgagtt ttcaactcca tagtctaggg ccctgagggc 240
 gtcagttctt ggtgggctgag ggtccttcca cccagccccc ctgggggagt ggagtgaggg 300
 gttctgcccg gtatgcagat gttgtctccc aagttcctga cccagatgtc tggcaggata 360
 acgtgacact gttccttcaa caggggaact gaaagtaatt ttgctcttla c 411

<210> 110
 <211> 451
 <212> DNA
 <213> Homo sapien

<400> 110
 ccgattccaa ggttcacaga tccytccctt aatatacaat caalkgqmba ccaatggtaa 60
 tgaacctacg agtacacaga ctacggggcg actaatcttc aactcctaca taactccccc 120
 attattccta gaaccaggcg aactgggact ccttgacglt ncaatcgag tagtactccc 180
 gattgaagcc ccccttcgtc tntaattac atcaagagac gtcttgcacl catgagctgt 240
 cccacattta ggttataaaa cagatgcaal tccgggagct ctanugccaa ccaatttcac 300
 cgtacacaga cggggggtat actacggfca atgtctctga atctgtggag caaacccacg 360
 tttcatgccc atgltccclag aattaatcc cctaaanctc tttgaatatg ggcacctatt 420
 laacctctag cccccctctt accccctcta g 451

<210> 111
 <211> 541
 <212> DNA
 <213> Homo sapien

<400> 111
 gctcttccaa cttttattgt taattctctt cactlqgong atacagagcl gkcgatttga 60
 agccacccac tgaccaggaa atgcaacttt tccaaaatca tccccccttt tcatgattgg 120
 aacagttttc ctgacggctc gggaggtttg aagggtgacg gccacatttg cacttgcaaa 180
 aaagygagtg ccccaagggc tcaaccacac ctcccagagc taccatggg clgcaagtrg 240
 cltggccaggt ttgggggttcg tgagctttcc llnctgctgc ggtggggggg cctcangaa 300
 ctgagaggcc ggggtatgct tcatgagtgk tncatttac gggacanaag cgcacatta 360
 ggataaggaa cagccacagc acttcatgct tgtgagggtt agctgtagga gccgggtgaaa 420
 ggatltcagk ttatgannat cttaagcaaa caacggtttt tagctgggtg nzaaacugga 480
 aaactgtgat gtgggcaat gaccaccaal tttctgccc tglgaaagtc cccatgaac 540
 c 541

<210> 112
 <211> 521
 <212> DNA
 <213> Homo sapien

<400> 112
 caagcgcctg gcgtttggac ccagttcagk gaggttcttg ygllttgtgc ctttggggat 60
 ttigtattga cccaggggtc agcctttaga aggtcttccg gaggagggcg agttccctt 120
 cagtaccacc cctctctccc caatttccct ctcccggcaa catctctggg aatcacacg 180

atattgacac	gttggagcgc	agcctgaaca	tgcacctcgg	ccccagcaca	tggaaaaacc	240
ccttccttgc	ctaagggtgc	tgagttctct	gcctctttagg	catttccaga	cttgaatttc	300
tcatcagtec	attgctcttg	agtcttttga	gagaaacctc	gatacgggtgc	acctggggaga	360
aagactttgt	ccccacttac	agatctatct	cctcccttgg	gaggggcagg	gaatggggac	420
ggtgtatgga	ggggaaggga	tctcctgcgc	ccttcattgc	cacacttgyt	gggacctgta	480
acatctttag	tgtctgagct	tctcaattta	ctgcactagg	a		521

<210> 113

<211> 568

<212> DNA

<213> Homo sapien

<400> 113

agcgtcaaat	cagaatggaa	aagactcaaa	accatcatca	acaccaagat	caaaagttaca	60
agratccttc	aagaaacagg	aaaaaacctcc	taaaaaccca	aaaggaccta	gttctgtaga	120
agacatttca	gcnaaaatgc	nagcaagtat	agaaaaaggt	ggttctcttc	ccaaagtggga	180
agocaaattc	atcaattatg	tgaagaattg	cttcoggatg	actgaccaag	aggclactca	240
agatctcttg	cagtggaggga	agtctcttla	agaaaaatagt	ttaaacaatt	tgttcaaaaa	300
tttccggtct	tatttccctt	ctgtuacagt	tgtatctctg	ctgtccttll	tataatgcag	360
agtggagaat	ttccctaccc	tgtttgataa	algtttgtcc	ggttctcttt	ccaaagaatt	420
gttgtccaaa	atgctctgtt	agttttttaa	gatggaaact	ccccctttgc	ctggtttctaa	480
gtatgtatgy	atgttllatga	ctggacatag	tagtagcagt	ggtcagacat	ggaaatggtg	540
gggmgacana	aatatcatg	tgaataaa				568

<210> 114

<211> 483

<212> DNA

<213> Homo sapien

<400> 114

tacggattcc	anccqantta	tggccaaaacg	attcctttta	gaggattact	tttctccatt	60
tgggttttag	taattctagc	tttgcctgta	aaqaatacaa	cgatggaltt	taantactgc	120
ttgtggaatg	tgtttaaagg	attgattctc	gaacctttgt	akttttgata	gtattttctaa	180
ctttcccttc	tttctctttt	gccttttaagt	ttcatgltct	gcctatgcaat	cgttttatatg	240
caagttttct	taattttttt	agattttctt	ggaltgtatg	tttaaacaa	aaaaagttctc	300
tttaaaactg	tagcagtagt	ttacagttct	agcaaaagagg	aaagtllgtat	ggtttaaactt	360
tgtattttct	ttcttllatga	ggcttctctaa	aggtatttll	tatgtgttct	ttttaacaaa	420
lattgtgttc	aacctttana	acatcaatgt	ttggatcnaa	acaagaccca	gcttatttttc	480
tgc						483

<210> 115

<211> 521

<212> DNA

<213> Homo sapien

<400> 115

tgtggtggcg	cgggctgagg	tggaggcccc	ggaotctgac	ccctgcccctg	ccttcagcaa	60
ggcccccggc	agcgcggccc	actacgaaat	gcctgtgggt	gaaaaatata	ggccagttaa	120
gctgaattga	aktgtcggga	atgaaqncac	cgtgagcagg	ctagaggtct	ttgcnaaggga	180
aggaatagt	cccaacatca	tcaattgggg	ccttcaggga	accggcaagg	ccccanccat	240
tctgtccttg	gcocggggcc	tgtctggccc	agcaotcaaa	gatgacatgt	tggaaactcaa	300
tqcttcaaat	gacaggggca	ttgacgttgt	gaggaaataa	attaaaaatgt	ttgctcaaca	360
aaaagtcact	cttcccnaag	gocgacataa	gatcatcatt	ctggatgaag	cagacagcat	420
gacogacgga	gconagcaag	ccttgagggg	aaactatgga	atctactota	aaaccactcg	480
ttcgcccttg	cttctaatgc	ttcggaatag	ataakcagag	c		521

<210> 116
 <211> 501
 <212> DNA
 <213> Homo sapien

<400> 116
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 ctgtgaaggga gaaagcagtg cagcagcagg aatgagtggg cggaaacccc ggccctccaca 120
 agctgccttc cagcagcccg ccagggccat ggcagagaga gactgcaaac aaacacaagc 180
 aaacagagtc tcttcacagc tggagtctga aagctcatag tggcatgtgt gaattctgac 240
 aaattaaaag tgtgcatagt ccattacatg cataaaccnc taataatant cctgttlaca 300
 cgtgactgca gcaagccaggt ccagctccac cactgccttc ctgcacatc acatcaagtg 360
 ccattggtta gagggttttt catatgtact tcttttatlc tgtaaaaggc aacaaaatat 420
 acagaaacaa accttccctt ttcaanncta atgttacaaa tctgtattat cacttggata 480
 taattagtat ataagctgat c 501

<210> 117
 <211> 451
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1) ... (451)
 <223> n = A, T, C or G

<400> 117
 caagggatat atgttgaggg tacryrytga caatgaacag ctccccaaagc acgagaaacn 60
 ttagttctct ccttccccag cgtctccttc gtctccccgg tttccgatg tccccagagt 120
 gagatthgac cttaagtaact gaatgatcag agtctgkct ttataagcct ctteattcag 180
 cgtatccant tcagcaattg cttcatcaaa lgcctgtttt gccaggctac aggccttttc 240
 aggagagttt agaattctcat agtaaaagac tngaaattt agtgcagac caagacgast 300
 tgggtgtgta ggetgcattt cltctctact aatttcaaxl gcttctgtgt aagcclgclg 360
 ggagttcgac ccaattggtt tgtttgttgc tccagatgcc acttcagaa gctatctaaa 420
 ctantctctt ttcattttca aagtagaaca c 451

<210> 118
 <211> 501
 <212> DNA
 <213> Homo sapien

<400> 118
 tccggagccg gggtactcgc cgcgcgcgcg gccgggtgcg ccactgcagg caccgctgac 60
 ggcgcctgag tagtgaggtt aggaaggag agglcatctc gctcggagct tgcctcggaa 120
 ggtctcttgt tccctgcagc cctcccacgg gnatqacaat ggataaagt gagctggtac 180
 agaaagccaa actcgtctgag caggtctgag natatgatga latgctgca gccatgaagg 240
 cagtccacga acaggggcct gaaatctcca acgaagagag aantctgctc tctgttgccl 300
 acaagaatgt ggtcagggcc ccgcgcgcgc ttcclgggt gtcattctca gctttgagc 360
 gaaaacagag aggaatgaga agcagcagca gatgggcaaa gactaccgag agnagataga 420
 ggcagaaact caggacatct gcaatgatgt lctggagctt gttggacaaa tatcttatto 480
 caatgctaca caaccagaa a 501

<210> 119
 <211> 391

<212> DNA

<213> Homo sapien

<400> 119

aaaaagcagc	argttcaacc	caaaatagaa	ctctcaaatg	tgggatagaa	caaaaccaag	60
tgtgtgaggg	qrgaagcaac	agcaaaqga	agaalqga	tgttgcaana	aagatggagg	120
agggttcccc	tctctctggy	ggactqctc	aaacactgat	gtggcagtat	acacattcc	180
agagtcaggg	gtgttcattc	ttttttggga	gtacgaaaag	glggggatta	agagacggt	240
tctggagggt	lqgggaccaa	ggctggctc	tttccccct	ccccacccc	ttgatccctt	300
lctctgatac	ggggaaggga	gctcgcatga	gggaggtaga	gttgggaagg	gaaaggtatc	360
cacttgacag	aatgggacag	atccttccc	a			391

<210> 120

<211> 421

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(421)

<223> n = A, T, C or G

<400> 120

tggcaatagc	acagccalcc	aggagctctt	cargcgcate	tgggagcagl	tcactgccat	60
gttccggagg	agggccttcc	tccactggta	cacagccag	ggcatggagg	agatggagtt	120
ccccgagggt	gagagcaaca	tgaacgaccl	ctctctcgag	tafcaagcag	taccagggat	180
ccaccgcaga	agaggaggag	gattlqntg	aggaggccga	aggaggagcc	taagucagag	240
cccccatcac	ctcagglllc	ctagcttccct	tagccgcttt	actcaactgc	cttttctctc	300
tccttcagaa	lctctqtttg	ctgcctctat	ctlqtttttt	gttttttttt	ctgggggggt	360
ctagaacant	gcttggcaca	tagtaggcgc	tcataaata	ctlqnttqnt	gaatgtctcc	420
t						421

<210> 121

<211> 206

<212> DNA

<213> Homo sapien

<400> 121

agctggcgcc	agggtccqnt	tgtqaaatac	agcglqgtcc	gcctttgcgc	tcagtgtaga	60
aacccacgca	tgttaaggtag	gttttggctc	ctctgctttt	ttclqaaata	cactaagagc	120
agcccaaaaa	ctgtaacctc	aaggaaaaca	taaagcttgg	agtgccttaa	tttttaacca	180
gtttccaata	aaacqgttta	ctacct				206

<210> 122

<211> 131

<212> DNA

<213> Homo sapien

<400> 122

qgagatgaag	atgagggaagc	lqagtcagct	acgggcacgc	gggcagctga	agatgatqag	60
gatgacgatg	lqagtcagca	qaaacaggaag	acgggcaggg	atgactagac	agcaaaaaag	120
gaaaagttaa	a					131

<210> 123

<211> 231

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(231)

<223> n = A, T, C or G

<400> 123

gatgaaaatt	aaataacttaa	attaastcaa	aggcaactacg	ataccaccta	aaacctactg	60
cctcagtggc	agtatgctca	kraagatcaa	gctacagAAC	atyatcta	atgAAkqta	120
gcaattacat	akcargaage	atgtttgctt	tccagagac	tatggacaa	tgttcattwg	180
ggcccaagag	gatatttggc	cnggaaagga	tcaagataga	tAAaggttaa	g	231

<210> 124

<211> 521

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(521)

<223> n = A, T, C or G

<400> 124

gagtagcaac	gcaaaagcgt	tgttattgag	tctgtgggag	acttcaggttc	cggtctctgc	60
agcagccgtg	atcgcttagt	ggagtgccta	gggtaglfnn	ccaggatgcc	gaatatcaaa	120
atcttcagca	ggcagctccc	accaggactt	aktccasnaa	attgctgacc	gcctgggctt	180
ggagctaggg	gaggtggtga	ctaaagaaatt	cagcaaccag	gagaccctgt	tggaaatttgg	240
tgaagtgta	cogtggagag	gatgtotaca	ttgttcagag	tggttctggt	gaaatcaatg	300
acaatttaat	ggagcttttg	atcatgatta	atgcchqnaa	gattgcttca	gccagccggg	360
ttatgtccgt	atccatagtc	ttcccttctg	ccccggcagg	ataagaaaga	tnagagccgg	420
gccgccaatc	tcagccnagc	ttgtgtcana	tatgtatctt	gtagcagtrc	ngatcatatt	480
atcaccatgg	acctacatgc	ttctcaaat	canggccttt	t		521

<210> 125

<211> 341

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(341)

<223> n = A, T, C or G

<400> 125

Atgaaagagg	ggccaaaggg	ggttcAAAA	taaaaatttc	tcttccttct	cccaaaaccl	60
gtacccacag	tcccagacca	caacccctct	cctccccggg	ggaagacaa	aaagagcagg	120
tgtggcatct	gcagctggga	agagagaggg	cggggagggt	ccagagctcg	tgttggctct	180
tttccaaata	taataacgtg	tgccagaact	ggaaattcct	ccagcaccca	ccaccccaagc	240
actctccgtt	ttctgcccgt	gtttggagag	ggaggggggg	cagggggcgc	aggcaccggc	300
tggttggcgt	ctgctgcatc	cgttgggtgt	gtaccccgag	a		341

<210> 126

<211> 521

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(521)

<223> n = A,T,C or G

<400> 126

aggttggaqa	aygtcatgca	ggtgcagatt	glocaggakc	agccacaggg	tnaagcccaa	60
caggcccaga	gtggcaatgg	acagaccatg	caggtgatgc	agcagatcat	cactaacaca	120
ggagagatcc	agcagahccc	ggtgcagctg	aatgcggggc	agctgcagta	tatccgclia	180
gcccagcctg	tatcaggcac	tcaagttagt	caggacacag	tccagacact	tgcacccaat	240
gtcaacaga	ttacacagac	agaggtcccq	caaggatcgc	agcagttcaa	gccagttcac	300
aagatggaca	gcagclclac	cagatccagc	aagtcccat	gcctgcgggc	cangacctcg	360
ccagcccctg	ttcatccagt	caagccaacc	aynccttona	cgggcaggcc	ccccaygtga	420
cgggcagctg	aagggcctga	gttggcaagg	ccaangacac	ccaacacaat	littgcacata	480
cagccccag	gcattgggca	cagcattttt	tcccagauga	c		521

<210> 127

<211> 351

<212> DNA

<213> Homo sapien

<400> 127

tgagatttat	tgcaattcat	gcagcllqaa	gtccatgcac	aggrgaactag	cacagtittl	60
aatgccllla	aaactataaa	gggaggtggg	cagcaahcac	acaaagtccct	aghttccttg	120
gtccctggga	gaaaagagtg	tggcaatgaa	tccacccaat	ctccacaggg	ataaatctg	180
tcttttaaat	gcaagaatg	ttccatggc	ctctggatgc	aaataacacg	agctctgggg	240
tcagagcaag	ggatggggag	agacccacga	gtgaaaagc	agctabacac	attcaactaa	300
ttccatctga	gggcangaac	aacgtggcaa	gtcttggggg	tagcagctgl	c	351

<210> 128

<211> 521

<212> DNA

<213> Homo sapien

<400> 128

ttcagacatg	ctctctgkcl	aggtggggag	caggaaacca	acctgctatg	ggaagcagaa	60
agagllhaag	gaaggtttcc	tttcatttcc	gttctttctc	tittgttttt	gaacaghttt	120
laxtatctct	aatagctaag	tcatttgcca	gucagggtccc	ggtagaahgt	agagaaacaag	180
gagcttgcta	agaattaatt	ttgctgttll	tcaccccatt	caahagagag	tgcctgttcc	240
cctgatggag	ttccattccc	gccaagggac	ggctgagtaa	cacgaaagca	ttcaagaaag	300
gcgggtgtga	actcaatccc	accccatgga	cagacccctc	actcttccct	cttagcggcg	360
gcgclactta	ataaatatat	ttatactttg	aatlctatgt	aacogatttt	lcccatggcg	420
catctaaagg	gcacttgcca	gtctttatcc	ggacagttcaa	gcactgttgt	tggacaaacag	480
ataagagaaa	agaaaaagaa	gaazacaacc	gaaactttct	t		521

<210> 129

<211> 521

<212> RNA

<213> Homo sapien

<400> 129

tgagcaggac	caahggcctg	gtcccccctc	atktgctgtc	gtaggaactg	acatgaaacg	60
------------	------------	------------	------------	------------	------------	----

cagatctagt	ggcagagag	agatgatga	ggacattctg	agacgagag	agcttcagga	120
agagcaatta	atgaagctta	actcaggcct	ggacaggttg	atcttgaaag	agagagctgg	180
gaaagagagc	agggaaaggt	catctcaggt	agccagctgc	taagattctc	catcaactc	240
agcttcacat	attccatcat	ctcannctgc	atctctccct	ggctatggga	gaaatgggct	300
tcaccggcct	gtttctacgg	acttcgctca	gtataacagc	tatggggatg	tcagcggggg	360
agtcagagat	taccagacac	ttccagatgg	ccacatgccl	gcattgagaa	tggagggagg	420
agtgtctatg	cccaacatgt	tgganccaaa	gatatttcca	tatgaaatgc	tcattggtgac	480
caacagaggg	ccgaaaccaa	atctcagaga	ggctggacaga	a		521

<210> 130

<211> 270

<212> DNA

<213> Homo sapien

<400> 130

tcactttatt	ttctctgtat	acacacaccta	tgttgtagcc	acacgtggag	cttgagtcgg	60
ctgcagggag	actctggtgt	gggtcttgac	gaggtggcga	ctggaactct	gacagggaga	120
cttggttaat	aaagtctcct	tcacagagtc	gggggctcag	tagctgtagg	tcctaggaat	180
ggcatcaaaq	gtgagctctg	cgaggttgcc	caaggttgga	gtgcagctcc	gggtctgggt	240
gtacagctca	tcgatacag	caatcagag				270

<210> 131

<211> 341

<212> DNA

<213> Homo sapien

<400> 131

ctggaatata	gacccgtgat	cgacacacac	ttgaacgagg	ctgacatgag	tcacgtccca	60
ccagcatttc	gttctactct	atgagacaag	atgctgagat	gacagaatca	gcttttgtta	120
ttatgtataa	tacgtctatg	atgtgtccat	gtcctaacct	tcttcatacg	cttctgcact	180
ctgggggaag	aggagtacat	tgaaggggga	ttggcaccta	gtggctggga	gttctgacag	240
aacctcagtg	ccaggagagc	tggcaactac	ctttgtccct	tccttcattc	ttgtgagatg	300
ataaacctgg	gttcagctct	taataaaat	ataacagga	a		341

<210> 132

<211> 844

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(844)

<223> n = A, T, C or G

<400> 132

tgaatgggga	ggagctgacc	caggaaatgg	agcttgngga	gacacagcct	gcaggggagt	60
gaaccttcca	gaagtgggca	ctgtgtgtgg	tgcctcttgg	gaaggagcag	aagtacacat	120
gcatttggga	acatggaggg	ctgcttgagc	ccctcaccct	gagatggggc	agggaggagc	180
ctccttcacat	gacagagac	aacacagtta	tcatttctgt	tcgggttgct	cttgagcttg	240
tggctcctct	tggagctgag	atggcttttg	ttatgagag	gaggagaaac	acaggtggga	300
aaggagggga	ctatgctctg	gctcagggct	cccagagctc	tgatatgtct	ctcagagatt	360
gtaaagtgtg	aagacagctg	ctggtgtgtg	acttggtgac	agacacgtgt	ttcaccacac	420
tcctgtgaca	tcagagagac	tcagttctct	ttagtcaggt	gtgtgatgtt	ccctgtgagt	480
ctgctgggct	acaggtgaga	actgtggagc	ccagtcacac	ctgtcacacc	aggaccttat	540
ccctgagatg	ccctgtgctc	cttccacag	ccacacctgc	tgctccagcc	aaacattggc	600

ggacatctgc	agcctgtcag	ctccatgcta	ccctgaacctt	nnctctctca	cttccacact	660
gagaataata	atttgaatct	gggtggctg	agagatggt	cagcctgac	tgctctctca	720
aaggtcttga	gttcaaatcc	cagcaaccac	atggtggctc	acaacccct	gtaatgggt	780
ctaataacct	cttctgcagt	gtctgaagac	acctacagtg	taattacata	taataataaa	840
taag						844

<210> 133

<211> 601

<212> DNA

<213> Homo sapien

<400> 133

ggcgggggcg	gcgcgcctcc	gcgcgcgcgc	cgcgngcgct	gccaglltat	naagggagag	60
agcaagcagc	gagttllgaa	gtctctgttg	ghcettigga	lncatttcca	tcgggtcccln	120
cagcgcctcg	tcagcctccn	gcagcccaag	tggtgaagca	gctcgagagc	aagactgctt	180
ttcagggaagc	cttggacgct	gcagglgata	aacttgatgt	agttgaactc	lcagccacgt	240
ggtgiggggc	ttgcaaaatg	alcagcctt	tccllccctt	ctctctcgaa	aagtattcca	300
acgtgatatt	cccllgaaqta	gtgtgtggtg	actgtcagga	tgllgcttca	gagtgtgaag	360
tcacatgcmh	gcacacatto	cagtttttta	agaagggaca	aaaagtgggt	gaattllclg	420
hgcccnataa	ggaaaagctt	gaagccccc	ttaatgaatt	agtataatca	tgllttctga	480
aaatataacc	agccattggc	lctttaaaac	ttglaatttt	tttaatttat	aanntataaa	540
aatatgaaga	calawaccmn	gttgccatct	gntgacaat	aaaacallau	tgctaacact	600
l						601

<210> 134

<211> 421

<212> DNA

<213> Homo sapien

<400> 134

tcacataaga	aatttaagca	gtttaacctc	tccllcaaaa	cacacgaat	gnccllctant	60
agagaaaccc	llccctccct	ccacctccct	ccccccacct	ctccalgaat	tnagaatcta	120
agagaaagag	taaccataaa	accaaglllt	gtggaatcca	lntccagag	tgcttaactg	180
gtgattaggt	taatatggcc	ctcllcccaaa	atttclattt	tnaaaaaat	tataacclllg	240
attgcttatt	acacacacac	tcagtaacaa	agllccntat	attgaaaaal	qcttttcccc	300
cccllccacg	caccgtttta	catatagcag	agaataarga	agaatttgot	agctagagcg	360
gagcactctt	caaattacac	caagcccgcc	agtggcllcl	ttccctcccc	ctctccalnn	420
g						421

<210> 135

<211> 511

<212> DNA

<213> Homo sapien

<400> 135

gganaggatt	caagaattag	aggaatttct	tgctnnagaa	aaagacaact	clcgncgcat	60
gttgacagac	aaagagagag	agatggcgga	aatanngggt	caatgcagc	acacactgaa	120
tgactatgaa	cagcltcttg	atgtanagtt	agccttgga	atggaaalln	gtgcttacag	180
gaactcttta	gannnccaag	aaagagaggt	gaagctgtct	ccagcgcctt	cttcccggtt	240
gacagllaln	ngagcattcc	caagtcgca	tgtaccgtac	aactagagga	aagcggaaag	300
gggttctctt	ggaagaatca	gagggcaggt	agtaglctta	gcattctcca	lcccgccctc	360
acacattgaa	atgtllcccl	gagcgaatt	galgttgatg	ggaattllal	cccgcttgaa	420
gaacacttct	gaacnggctc	ccccaatggg	aaagcttggg	agatgatccg	aaaaattgga	480
gacacatcag	taagttataa	atatacccca	a			511

<210> 136
 <211> 341
 <212> DNA
 <213> Homo sapien

<400> 136
 catgggttcc accaggttgg ccaggctgct cttaaacctac tgacclnagg tgatccacc 60
 gctcggcct cccaaagtgc tgggattaca qnqgtgagcc acnacqccc gcccnnnnn 120
 ctgttttttl tgtctttagc glannyyctct cctgccatgc nqtatctaca taactqaqt 180
 gactgcacgc aagctcngtc acccgtgggt ctttllctct ttccagttcl tctctctctc 240
 ttcaagttct gectcagtg aagctgcagg lccccagtta agtgalcugg tgagggttct 300
 ttgaacctgg ttctctnuyt cgnatttate cttcatgala g 341

<210> 137
 <211> 551
 <212> DNA
 <213> Homo sapien

<400> 137
 gatqatttgg nnnclctctc tcaaaaaaaa cctccacaag aafctnnctgc t cattacaga 60
 agaagatgca ttttaannat qnqthatttt caactttata lctnaggaca agtatccat 120
 aarrattgtg ccagaagaga ttgaatacct gcttcaaggag cttaacagaag ctalgggny 180
 aggttqnycc nnaqaaacat ttgaacattc lannatcaac ttgatgacn ntuaaancgg 240
 cctttctgca cgggancttc ttqancttat tggaaatgga cnytttagca aaggcatgga 300
 ccggcagact gtgtctatgg caattaatga agtctllnat gaccttatat tagatgtgt 360
 nneqnnnytl lctctkgtga aaaaaggcca nnyccggaaa aactggactg nnaqatqnt 420
 tgtactaaa ccccaactaa tttcttaacta tgtgagtgag gactlqnnq ntaagaaag 480
 agacattctc trggatgaaa attgctgtgt agaagtcctt gcttgacaaa agatggaaag 540
 aagqnnctll l 551

<210> 138
 <211> 531
 <212> DNA
 <213> Homo sapien.

<220>
 <221> misc_feature
 <222> (1)... (531)
 <223> n = A, T, C or G

<400> 138
 gactggttct ttatttcaaa aagacacttg tcaatatcca gtrtcanaac agttgcnctc 60
 ttgatttctc tttctcccaa tgggccccaa agagacnnn tanaaggaga gtacatttta 120
 agccanfaag ctgcagygat tacacctaac agacchucta gaacettac cagaaaarg 180
 nqactqntc qnqnnqnnn cttaaaagel. nnaaaaaactg ccagcccacg gactlqnnq 240
 gctgtcacag ccagatggng tggnnagggt gccacaaacc caaagunnaq tttcaaatc 300
 atataaaatt taaaaagttt tqtacntaag ctattcaaga tttctccagc actgactgat 360
 acaaaagcaca attgagatgg caattctaga gacagcauyt tcaaacccag azaaggtga 420
 lyaaglgagc tttcnnnlgg ctaaatcagt ynnannaca cagtcttctt tcttctttc 480
 tttcaunyan qcagqnnnyc aattaagtgg tcaacttaac ataagggggg c 531

<210> 139
 <211> 521
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(521)
 <223> n = A,T,C or G

<400> 139
 tgggtgggca ccattgggtgg gatcaccacc atcgaggggg tgaagcgcaa gatccaggtt 60
 ctgcagcagc aggcagatga tggcaggagg cgaagtgggc gctccagggj agaagttgag 120
 qqagaaaygc qqqcccgjga acaggctgag gctgagggtg cctccttgaa ccgtaggaln 180
 cagctggttg aagaagagct ggaccgtgct caggagcgcc tggccactgc cctgcaaaag 240
 ctggaaagaag ctgaaaaagc tgcctgctgg agtgagggag gtatgaaggf kcttgaaaaa 300
 cgggccttaa cagatgagga aagatggaa ctccaggaaa tccaaclaaa agaagctaag 360
 cacattgcag aagaggcaga taggaagtat qnaggaggtg cctgtaagct ggtgatcatt 420
 gaaggagact tggaaaccga cagaaggaaa gagcttgagg ttggcaaaag tccngllgac 480
 cagagcttgg algaaccaga llaagactgat ggacaaagac c 521

<210> 140
 <211> 571
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc feature
 <222> (1)...(571)
 <223> n = A,T,C or G

<400> 140
 agggggcngcg ggtgggtggg ccactgggtg nccgacttag cctggccaga ctctragcac 60
 ctggaaagcgc cccqnnagtg acagcgtgag gctgggaagg aggacttggc ttgagcttgc 120
 taaactctgc totgagcctc ettgtgcctt gattttagat ggctccggca aaggaaggtg 180
 gcgagaagaa aaagggcctt telgcnatca nccgaagtgg nccccagaa tacaccarca 240
 accttcaaaa ggcctatcctt nngatgggt tcaagaagcn tgcacctogg gcactaaaag 300
 agattcggaa atttgccatg naggagatgg gaactccaga tctgcgcatt gacacaaagg 360
 tcaacaaagc tgtctgggac aaaggaataa qnnntgtgac ataccgaalc cgtgtgtcgg 420
 ctgtccagaa aacgtaatga ggalgaaat tcaaccsaia ngtatatata ttggttacc 480
 lahgtacckg ttaccacttt caaacatota cagacaglac ntgtggatga gaactaacg 540
 ctgactgtca gatcaataa agttataaaa c 571

<210> 141
 <211> 531
 <212> DNA
 <213> Homo sapien

<400> 141
 lagggaqica canttggccc ttctcctctc caaagsgcaa gaacctcctt ctctttggag 60
 aatggggagc cctcttgag acacagaggg tllaaecttg gatgacctct agagaalcy 120
 ccaagaagc ccacctctg gtcccaacct gcaqacccca cagcagtcag ttgttcagac 180
 cctgctgtag aaggtcaatt ggtccattg cctgcttcca accaatgggc nngagaqaag 240
 gcttlatatt ctggccaaac caftccctct gtaccagaa ctcggttttc agtcagtgtt 300
 gtccagcaac ggtaccggtt acacagtca ctaagacaca ccatttcacc tcccttgcaa 360
 agctgttagc cttagagtg ttgcagtga cactgtttac acaccgtgaa lataltccca 420
 tcagtccatt ccagttgca ccagcctgaa ccatttggtc cctggtglla actggaatcc 480
 tgtttacaag gthqaglcgg ggttgclqa ctctctllca tthgagggc c 521

<210> 142
 <211> 491
 <212> DNA
 <213> Homo sapien
 <220>
 <221> misc. feature
 <222> (1)...(491)
 <223> n = A, T, C or G

<400> 142
 acctagacag aaggtgggtg agggagggant ggtaggaggg: ttaggcaatt ccttgggtant 60
 ctgkcttggg aacctatctg aggaatcagc atgagggccc tactgagaga ngtccccaga 120
 aactgctgac tgcattctgt aagagttaac agknnagagg tagaaglggtg tttctgaatc 180
 agagtggaaag cgtctcaagg gtcccacagl. ggaggtccct yagctacctc ccttcctgta 240
 gtgggaagag tgaagcccat gaagnnctga gatgaagcaa ngatgggggt cctgggctcc 300
 aggaaggggc bgtgctctct gcagcaggga gcccccagag tcaagaagaa agaatctatc 360
 atttgtttga agaaaccttg cccggatact agcgggaaac tggaggccgg ngtgggggca 420
 caggaaagtg gaagtgatt: gatggagggg: aggaagcct atgcnnngtg gccgagttca 480
 ctctgaaagl. g 491

<210> 143
 <211> 515
 <212> DNA
 <213> Homo sapien

<400> 143
 ttaagcaat tgtaacaagt atatgkagat: tagagtgagc aaaaakcatk: ncaattttca 60
 ttctcagllt clalctkccc aattgtttctg taatgtctgl. aatttactt aaaaattaac 120
 aaagcccaan atttatattt tgcaagaaa gccalnncta cattaatctt acctttccac 180
 tcacgggccc atctccttcc tcttttccct aactatgcca ttaaaactgt tctactgggt: 240
 cgggctgtg gctcalgcl. glankcccc aattttggga ggcgaaggga ggccgctcat 300
 gaggtcagga gactgagacc atctggcca acatggtgaa nccccccctc gactaagaat 360
 acannaattn gctgggcatt gtggcgcatg cctgl. ngtct cagctactcg ggaggtgag 420
 gcagaagaat cgtttgaacc cgggaggcag aaggtgaggt gagccccgal. cgggcccctg 480
 cactctagcc tgggggagag actgagagctc tgctc 515

<210> 144
 <211> 340
 <212> DNA
 <213> Homo sapien

<400> 144
 tgtgccagtc tacaggccta tcagcagcga ctccctcagc aacagatggy gbtccctgtt 60
 cagcccaacc ccalgagggc cccgcagcat atgctcccaa aknnngccc gtccccacac 120
 ctccagggcc agcagatccc taattctctc tccalnnag tgcgtctctc ccagcctgtc 180
 cttctccac ggccacagtc ccagccccc ngtccagtc cttccccaag gctnccgct 240
 cagccttctc cacaccaggt ttcccccag agaatctcc cactctctgt acctggtagt 300
 gccagggcca accnnctgga acagggggat tttgccagcc 340

<210> 145
 <211> 630
 <212> DNA
 <213> Homo sapien

<400> 145

tgtaaaaact	tgttttttaa	ttgtatataa	atcaaggttg	cccatgcccc	ggggggtgtg	60
aggaaatcca	agcagaccag	ctgggggtgg	gggatgtcag	ctacctcggg	ggatgtgtgt	120
tcttcnnaac	gggctgagaa	ggcctgtcag	gggcccaggt	cccacagaga	ggcctgggat	180
actcccccaa	cccagagggc	agctgtggga	gtggggagac	cccalcgtyc	cccagaggtg	240
gccacaggcl	gaaagagggg	cctgagggac	gacagcctgc	aaagcccggt	gctgcagttc	300
actaatttt	tacagaataa	aaggaacatg	gggatgggga	aaaaagcacc	aggtcaagga	360
gggcccaggg	gccccagatc	ccagaggggc	caggacatag	gatgccagca	ccacctagc	420
agctcccaac	gttccctggg	caggagggcg	ccagggattg	gcacaggccg	ctgtgtggca	480
tcaccccaac	tttggaagac	ttgtcccgac	agaggtcagc	tcagaggggc	tctctgtggg	540
ccacacttgt	acgaacacag	atctccttgg	taatgacgta	ccaccccgcg	aggcaggggt	600
gacagggcac	gggaggtctc	agcgcacatt				630

<210> 146

<211> 521

<212> DNA

<213> Homo sapien

<400> 146

atnnetctct	ggttttgggt	gtaatanggg	ctgtggggga	taantctgaa	gacttggggg	60
cottgggtct	ggagagccac	gaagagggga	ggaaagggag	gcaagtccct	aaactaaaca	120
atgacclgal	ggattgtctg	acaaagatag	agaggtgag	tcctgtgtct	tgcactccca	180
ccngactgga	gtttttgggt	ctgaatagag	ccagttgclg	aaaaattggg	ggtttgtgtg	240
agaaatctga	ttgtttgtgt	tattcaactg	gtgalittaa	asataaacag	caacaaacaa	300
aaaaaccctg	actggtctgt	ttttccctgt	aktctttaca	actatttttt	gacctctga	360
aaattattat	acttcaaccl	gaggaagagc	tgtgtgtgtt	gaggaatttt	tgtaatattt	420
taatttattt	tattctctct	cctttttatt	ttgtcttcag	aatccgttga	gagactaata	480
aggcttaata	tttaattgat	ttgtttaaca	tgtatataaa	t		521

<210> 147

<211> 562

<212> DNA

<213> Homo sapien

<400> 147

ggcatgagag	gycactcggc	ggacgcaagg	gagaggggga	gcacatggag	gactgcaagg	60
ggcaggttgg	gacccgttcl	gagctgclgc	tggatagtcg	tggtttgggg	gatcgaggtat	120
actcaccaga	gacccgaaat	gcccgaacca	atcaatgclg	gagttaccac	cagggacgca	180
gagctggagt	tgcaatcca	gccaataaca	actggaagac	ggtcttttga	tcaggtggta	240
aagactatcg	gcttcgggga	agtgtgggtac	lltqncctcc	actatgloga	laalaaagga	300
tttcttaaccl	ggttgaggtc	ggttaagggg	gtgtctgccc	aggaggttcg	gagggaggtt	360
ccctccagt	tcaggttccg	ggccaaagtt	ctacctgaa	gctgtggtcg	aggagctcat	420
ccaggaatcc	acccagaaac	ttttcttctc	tcaagtgagg	gaggaatcc	ttagcgatga	480
gatctactgc	cccccttgag	actgcctgtc	tcctgaggtc	ctacgcttgt	gcatgccaag	540
tttggggact	gagcccgagg	ag				562

<210> 148

<211> 820

<212> DNA

<213> Homo sapien

<400> 148

gagggagtcg	ggatctctag	catgtatgca	ccccaatctc	aaaggggcat	tcttggggag	60
gltctctggg	caatctctag	ggtcactccg	tggaaactcg	ltaaggtaca	actgaggtgt	120
gaaaggaaag	gacccctgca	gaacccgcca	gaaatccacg	ccggcgatca	gctgatttgt	180

ctcgggcagc	gaggaagtc	ggctaaagat	gagcaggagc	l.tgtcaatc	cctgggctll	240
tggagtgag	tccagcagca	gtctgaggta	ttcggggcgn	ttatgcacnt	ggacccn:ag	300
caaccagccc	cggggggccc	aggtgccagc	cttatctaca	ttccl:agg	tctggtcaaa	360
gttcagclgy	tcacccagg	acgggtaccc	cagnttcagg	tlgtccgctc	gggtcggggg	420
actgncggga	ccagggaagc	cgcgcacacg	l.tggagacc	tgccgatgcc	ccagccaca	480
gaggggtggt	ccccacggc	gcgcgggca	cccgccgcgc	gttcggcgtc	cagcaacggg	540
ggggcgaggg	ccctgtttct	cctttgtcgc	ccattgtctc	tccagagggc	gaagccggcg	600
gcggcacc	gcagcgtcag	gattagcacc	ttcgtttgt	agatgcggaa	cctcatggtc	660
tccagggccg	ggagcgcagc	tacgcctcga	gcgtcggcgc	cgcgcgtagg	agcgcggcgt	720
cggttcgtc	tccttcl:cl	ccattcagca	ccacgggctc	cggaaaaagc	tcagccccgc	780
tcccaacgc	gcctagctt	cgttacctgc	gcctcggctg			820

<210> 149

<211> 501

<212> DNA

<213> Homo sapien

<400> 149

caagattttta	tttgcagtag	tcac:ggggc	cgtl:cttgc	tcttall:tg	cctgctagcc	60
tgcctttcca	gctgccl:gc	ccggcgcaag	gccttgarga	calctgcag	ggctgggaa	120
tgcctggclt	gctgggccc	agcagatcc	gctttgttca	caaaaggtctc	cagntcatag	180
tctggtctct	cgttcctctc	agagagctcc	agccagltctg	gtccttgctg	tatgatctcc	240
ttgagctctt	ccatagccll	ctcctccagc	tccctgatct	gagtccttgc	ttcgttaaaq	300
ctggacatct	gggaagacag	ttcctcctct	tccttggala	anttgccctg	aat:agcgcc	360
ccgttagagc	aggttcctat	ctcl:ctgtt	tccall:tgaa	tcaactgctc	tccactgggc	420
ccactgtggg	ggcl:caagtc	cttgacctg	cl:gcctatct	taagggclgt	taaaggatat	480
tcacgggaag	ttatgcctgg	t				501

<210> 150

<211> 511

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(511)

<223> n = A,T,C or G

<400> 150

ctcctcttgg	tacatgaacc	caaglt:tgaa	gtggac:tgaa	caaagtatct	ggagaa:ccc	60
gcattctgct	ttgactttgc	al:ctgatga	acagcttoga	atgaagttgl	cl:agcngtto	120
acagcaagge	cactgttacc	gacacatctt	gaggttgga	agcgaactcl	ttttgcatat	180
ggccagacag	gaagtggcaa	gacacatacl	atgggcggag	ac:ctctctgg	gaaagcccag	240
actgcctccn	aaaggatcta	tgccatgccc	ttccgggcn	tcttctctcg	aagaatcaac	300
cctgotaccg	gaagttgggc	cl:ggaggtct	atgtgcactt	cttcagagac	tc:agcnggga	360
agctgtttga	actgcctccc	aaqaaggcca	agcttgccgc	tgc:ggagga	cgccagccaa	420
caggl:gcag	tgggtggggc	ttgcaggacc	atctggntaa	ctctgcttga	tgatggcant	480
caagatgctc	gacatgggca	gcgc:cl:gcag	a			511

<210> 151

<211> 566

<212> DNA

<213> Homo sapien

<400> 151

tttgggacttc	aagcgacaaa	ttgggawgtg	aatgggaaga	tgcttatcat	gaacalcagg	60
caaatctttt	gcgccaaagt	ctgatgagac	gacgggaaga	atttaagncg	atgggagaaac	120
ttcacaatna	agaaalccag	naacgtaaa	aatggcaatl	qnggcaagag	ynqgaacgac	180
glhgaagag	ggaagagatg	atgatttctg	aacgtgagat	ggaagaacaa	atgaggcgcc	240
aaagagagga	aagttacagc	cgaaagggtt	acatggatcc	acggggaagg	gacatggcga	300
tgggtggcgg	aggagcaatg	aacatgggag	atccctatgg	ttcaggaggg	cagaaatllc	360
caenlclagg	aggtggttgt	ggcataggtt	atgaagctaa	lactggcggt	ccacgaagca	420
aatgagtg	ttccatgatg	ggaagtgaac	tgctgacaga	ggcgtttggg	canqgaggtg	480
cggggcctgt	gggtggacag	ggfctatag	gaatggggcc	tggaactcaa	gcaggatag	540
gtagagggag	agagagatc	qanngc				566

<210> 152

<211> 518

<212> DNA

<213> Homo sapien

<400> 152

ttcgtgaaga	cctgactgg	taagacaaic	actctcgaag	lqgggcccga	gtgacacccat	60
tgaagxhlyc	anngcnaag	lccagacaa	ggaagccctc	cctcctgacc	agcakaaggt	120
natcttttgc	gggaacagc	tggagatgg	anngacccctg	tctgacacaa	aatccagaa	180
agagtccacc	ctgcacctgg	tgtccgclcl	cagaggtggg	algcnaatct	tctggaagac	240
cctgacttgg	agagacacaa	cctcagaggt	ggagccacgt	gacacccatg	agaaiglcna	300
qgcnaagatc	caagataagg	aaggcatccc	tcclnatcag	cagaggttga	tcttttctgg	360
gaaacagctg	gaagatggac	gcacccctgt	lqnetacaa	atccagagag	agccacactc	420
gcactttggt	ctgcgcttga	gggggggtgt	ctaagtttcc	cttttcaagg	tttcaacaaa	480
lctccttqna	cttctcttcc	actaangttg	ttgcaallc			518

<210> 153

<211> 542

<212> DNA

<213> Homo sapien

<400> 153

gcgcgggtgc	gtgggcact	gggtgacaga	cttgggttgg	ccagactctc	agcaacagg	60
agggcccccga	gagtgaacgc	gtgaggtctg	gagggagagac	ttggcttgag	cttggatagac	120
tctgctctga	gcctccttgt	cgcctgcaill	lqngtggctc	ccggcnaagg	gggtggcgag	180
aagaaaaag	gcctgllclg	calcnaagaa	gtggtaaccc	qngaatccac	catcaacatt	240
caaaagcna	tccatggagt	gggttcaag	aagcgtccac	ctcgggcact	caaaagagall	300
cgggaatttt	ccatgaagga	gatgggaact	cnaqatgtgc	gcattgacac	caggtctaac	360
aaagctgtct	gggccaaaag	aataaggaat	gtgcacatacc	gnaacnctgt	ggggtgtctc	420
agaaaaagla	atgaggtatg	gatttcacaa	aataagllct	atactttggg	tacctatgta	480
cctgttaacc	ctttcaaaaa	tctacagaca	glcnautgtgg	atgagaacaa	atcgctgata	540
gt						542

<210> 154

<211> 411

<212> DNA

<213> Homo sapien

<400> 154

aattctttat	ttaaatcaac	aaactcatcl	tcctcaagcc	ccagacccatg	gtaggcagcc	60
ctccctctcc	atcccttcaac	cccacccctt	agccacagtg	anngaatgg	aaatgagaa	120
gcaacgaggg	cctctnagag	ggaaggtctg	cccagatgta	lqntgagcac	aglcagllcc	180
gctgtggclg	gggcagcagg	lytccagagg	tcclnucclcl	aatataagtt	actgcagcca	240
cagclglagg	ngaagcatat	lqntagaagg	aagggccatc	cagcatcaga	aggcagaggg	300

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agcatcagtg actcccaggg ctggaatgaa cggaggaacac agagntcaga gacaggaacag      360
gccaggggga agaaaggagag acagaatagg ccaggggcag gacgtgaggg n      411

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<210> 155
<211> 421
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(421)
<223> n = A,T,C or G

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<400> 155
lgaatgaalcl gggtagggctg gaagtagecc gagatgatgg gctctttctcl ggggatccca      60
actggttccc taagaantcc aaggagaacc ctcgggaactt ctgggataac cagctgcaag      120
agggcaagaa cgtgatcggg ttacagatgg ccaccaaccg cggggcgtct cangcaagga      180
tgactggcta cgggatgcca cgtgaagatcc tctgatccca cccaggcct tgcctctgcc      240
ctcccaagaa tggttaatat atatgtagat atalatttta gcagtgaal lcccaagag      300
cccagagct ctcaagctcc ttctgtcag gctggggggg tcaagcctgt cctgtcacc      360
ctgaagtgcc tctgtgcate clctccccca tgcctactaa tgccttccct tcccacagc      420
n      421

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<210> 156
<211> 670
<212> DNA
<213> Homo sapien

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<400> 156
agcggagctc cctccccctg ttgctacacc ttaccocncc caggctcagc calcagagag      60
aactccagcg actgggtaac cactgacahh cagggtgaagg tgcggggcac ctacctggt      120
acacaggttg tgggacagac aggtgttctc cgcagtgtca cggggggcat gtgctctgtg      180
lacttgaagc acagtgaaga ggttgtcagc attccaglyg agccctcga gectatcacc      240
cccaccaaga acanccaggt gaaagtgate ctggggaggg atcgggaagc cacyggctc      300
ctactgagca ttgatggtg ggtatggcatt gtcctatgg accctgatga gcaagtacag      360
atctcacc cccgttctc ggggagurtc ctggaagcct gaagcagga gggccgggtg      420
actlclclagc atgaanagt atcctcttc ctcccttggc ccttggctgc gacacaagat      480
cctcctgag ggttagggcg attgttctg alclcccttt gtttttctt claggttllc      540
atcttttccc tccctggtgc tcatggaa lctggttagag tctggggag gctcccccac      600
ttctgtacc tccctccccc agcttgcctt tgttgtacc lclltcaatn aaagaagct      660
gtlctgclcl      670

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<210> 157
<211> 421
<212> DNA
<213> Homo sapien

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<400> 157
ggttcacagc actgctgctt ggtgtttgcc ggacaggaat tccaggctca caaggctclc      60
ttagcagctc gttctccggg ttctagtgc atgtttgaac atgaalggg gggagagcann      120
aagaatcgag ttgaaatcnn lcatgtgagc cctgaagttt clagggaaat gatgtgctc      180
atttcacagg gggagagctc aaaccltggc aaatggctg atgatttct ggcagctgct      240
gacaggtatg cctggagagc cttaaggtgc atgtglagg atgcctctg cagtaacctg      300
tccgttggag acgctgcaga attctctc ctggccagac tccacagtgc agatcagttg      360
aaactcagc cagtggattt catcaactat catgcttcgg atgtcttggg gacctcttgg      420

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g

421

<210> 158
 <211> 321
 <212> DNA
 <213> Homo sapien

<400> 158

tcttagccat	ttttctgctt	ctttggagaa	tgacgccac	ctgactgctc	atttgtgttg	60
gttccatgcc	aattgggtgaa	alaggaaccc	atccggtagt	ggagccggag	ggacatcttg	120
tcctccacgg	tgttgtgtgcg	ntttggagca	taccagagct	tgggtgtctc	gccatacagg	180
gcaaaagaggt	tgtgacaaaag	aggagagaca	cggcatgcc	gtgcagccct	gatgacagct	240
tctctgtctg	tgtactctcc	actgcccaga	cggagggggt	ccctgtccga	cagatagaag	300
atcaattcca	cccttggtt	g				321

<210> 159
 <211> 596
 <212> DNA
 <213> Homo sapien

<400> 159

tggcacactg	ctctcaagaa	actatgawga	tctgagactt	llttgtgtat	gtttttgaet	60
ctttttgaglg	gttactatct	gcttctttat	agatgttact	acctccttgc	acaaatggag	120
gggaattcat	tttcatcaat	gggagtgtcc	ttaglgtnta	aaaaccatgc	tggttatatg	180
cttcaagttg	taaaaatgaa	agtgaactta	aaagaaaata	ggggalggcc	caggatctcc	240
actgataaga	ctgtttttta	gttaactttaa	gacctttggg	tttaccagct	tatgtgaaaa	300
aatctgagct	tactgagttg	gggaattcat	tgtttaaaag	tggctgtgtg	tgtgtgtgtg	360
tgtgtgtgtg	tgtgtgtgtg	ttttgttttt	caaggagagg	aatttattat	tttaccgllgc	420
ctgaattac	tgkgtaaaata	tatgtgtgal	atgtatttgc	tytttgccma	ctaaatttag	480
gvctgtataa	gtactactatg	cttacttggg	tggtgatynl	ccagatattc	gatgatamcc	540
cttcaaatgg	taaccygcct	ttttcccttt	gctylomatt	aaagtctatt	cmaaaq	596

<210> 160
 <211> 515
 <212> DNA
 <213> Homo sapien

<400> 160

gggggtannc	tctttattag	acggttattg	ctgtacacca	gggtccagagc	gcagtgtaaq	60
cagtgtcaga	ggcccgcgtt	cagcccaaga	atgttgattt	tctctcccta	llgalnaccg	120
tgggtgggtt	tcttcagaaa	agcccagag	qongggacca	glgagttccn	aggttagaag	180
tggaaclggg	agacttccgt	cccatgttgc	ttccacgcht	ccaggctggg	cagcaaggag	240
gagatgccca	tgaactgcca	ggtctcccca	tcagacacca	gtgaagtctg	glaggacagc	300
agccgcacgc	ctgctctctg	caggagggcca	atcttggtag	gcagcattgc	aggatcagag	360
gtctgagtc	ggaaacaggag	cagggggag	tccctgcggg	gaagcacttc	tggccgaaq	420
acagclonal	lgagcccttg	cagtacnggy	gtagtgcctt	ggaccaagcc	cacagctcgg	480
laaggggccc	ctgcccaggc	cagggcacgg	agggg			515

<210> 161
 <211> 936
 <212> DNA
 <213> Homo sapien

<400> 161

taattttctta	gtcgttttggg	atcccttacc	atgcacaaagc	lltggacaga	agggtccaca	60
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aaaggaaccag	gggtgtgttta	lqqcatccag	ttanqccaga	gctgggaalg	cctctgggtc	120
atccacatca	ggagcagaag	caottgactt	gtcgggtcctg	ctgccacggt	ttgggagcc	180
accagagcc	ggtcagccctc	gtccctccct	gcggccacgl	cttggggggo	caaggtctcc	240
aaaattgata	tccagotgag	acgttctatc	atttgcclgc	ttccggaaat	gattggtccat	300
aaccgaatct	tcagcatgag	ctctctcaac	cttgggttta	tgaagaacca	atccctctct	360
ccacagucc	tcaggaacct	catttggttt	tcggatatta	aattctactt	ttgcccgglc	420
cttattttga	ntagccctcc	actcatccaa	gttcattctc	l.l.kggaccc	cctctcttcc	480
ctcttcaact	tcattctctc	tattttcagt	gtctgccact	ggatgatgtt	cttcaacctc	540
aggtgtttcc	tcagtcacal	l.kgattgate	caaglcagtt	aattcgtctt	kgacagttcc	600
ccagtttgtg	gntccgctac	ctccacgttt	gtctctcgtc	ttcaggccag	atctatccac	660
tccactatgc	ctatcaaat	caagttttgc	acgagaatca	aatccatctc	ctcagcccat	720
ccacagtcac	cgcccccctc	gactctctcc	aagacaccca	cgacctcgaa	kggttcggtc	780
ataatcgggt	ctatcaactg	aaaattcgcc	l.kcttccccc	ttttctctca	gtggttttcc	840
gaattcttct	tcacgaggtg	gtcggcttct	tggctctctc	tcattatttt	tccttccccc	900
ctgaagttgt	tqatcaggtc	ttcttccaac	tcgctc			936

<210> 162
 <211> 950
 <212> DNA
 <213> Homo sapien

<400> 162						
aagcggatgg	acctgagtc	gcgcaatcct	agccctctcc	cttgggctctg	cttctggtgt	60
cgacatcagt	gacagacgga	agcagcagac	catcaaggct	acgggagggc	cggggogctt	120
gcgagatctg	agtttgctct	ctctctctcc	cgccagctct	atgctgctt	tgtcttcaal	180
ggantcaga	ctgtggagac	gcgctggggt	cctctctctga	gcagccagcg	gaacatctcc	240
atcgccgtcc	acattgctca	cagggacctg	gagcagcagc	cctgtcgggc	gctgctggtg	300
gagagactcg	ggatgacctc	tgcl.cagtt	cagggccttgc	tcagggaggg	ggaaaagtct	360
ggctgagggg	tgatgagggg	gtctggtgac	attgggggaa	ctttgcaatg	cccggaagac	420
ttactctccg	atgaggttgt	ggaaactagaa	aatcaggtctg	catgaccaa	cctgagcag	480
aagtaacctga	ctgtgatttc	aaaccccagg	tggltactgg	agcccatacc	tagggagggg	540
ggcaaggatg	tattccaggt	agacatccca	gagcaacctga	tccttttggg	gactgaggtg	600
tgacaagtgt	gggttctclg	agggagctgt	corgagaaac	caagcl.cagtc	atggcactct	660
caatttgcac	tgtgacgca	gacctgtaca	aattaggtllc	agpatgaatt	tcacatgctt	720
tggagagctc	cacccactaa	gcactgtgca	tglanacagg	ctccttctgt	cagatgaggg	780
aagttagggg	tggggttttc	cttggcl.gat	gcctctctag	gcacacaggg	aatgtctcaa	840
glacttctgc	cttaggttag	anggcaaaagc	tgccaglaac	tgtctcagca	ttgtgtctaa	900
tttgggtcct	gctagttct	ggattgtaca	aal.caggtg	ttgtagatga		950

<210> 163
 <211> 475
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1) ... (475)
 <223> n = A, T, C or G

<400> 163						
tggagggcc	gcccgggag	gtgtcggagl	ccagcaggg	agggctgctc	ttgtatgtgt	60
tctccggctg	cccacltctc	tcccaclcca	cgccagctgc	gctgggtag	aagccttga	120
ccaggcaggt	gaggtgac	tgggtcttgg	tcactctctc	ccgggagggg	ggcaggtgt	180
acactgtgc	ttctcggggc	l.gacctttgg	ctttggagat	gglttctctg	atgggggctg	240
ggaggggttt	gttggagggc	ttcacttgt	actccttgc	attcaaccag	tcctgggtga	300

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ngacgggtgag gacgcacacc aacgggtacg ngctngtgta ctgcacccctc cgggggtttt 360
tcttggaatt atgcacacctc acggcgctca cgtaccaatt gaacttgacc tcagggtctt 420
cgtggtctca gtccacccac aagcatgtaa cctcaaaccl cgggcgggan cacc 475

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<210> 164

<211> 476

<212> DNA

<213> Homo sapien

<400> 164

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agcgtggtcg cggccgaggt ctgaggttac atgcgltgtg gtggacgtga gccacgaaga 60
ccctgaggtc aatttcacct ggtacgtgga cggcgtggag gtgcacatg ccaagacaaa 120
gccgcgggag gacaggtaca acagcacglc ccgtgtggtc aggttcctca ccglactgca 180
cagagatagg ctgaatggca aggaatlcac gtgcacgttc tccaaccaag cctccacagc 240
ccccatcgag aanaacctct ccnagacca agggcagccc cgagaacnac aggtgtacac 300
cctgccccca tcccgggagg agatgaccaa gaaccaggtc agctgacct gctgggtcaa 360
agccttctat cccagcgaca tggcctgtgg agtggggagg caatggggag cgggaaaca 420
actacaagac caagctctcc gtcttggaat ccgacacctg ccgggcgggc gctcga 475

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<210> 165

<211> 256

<212> DNA

<213> Homo sapien

<220>

<221> misc. feature

<222> (1)... (256)

<223> n = A,T,C or G

<400> 165

```

agcgtggttn cggccgaggt cccaaccaa gtgtcancct ggaggtcttc aaagtcttct 60
gcacacatgga gacaggagag acgltggtgt acccaactca gccagtggtg gccagaaga 120
actggtacat cagcaggacc cccaaggaca agaggtctgt ctggttcggc gaggacatga 180
ccgatggatt ccagttcgag tatggggccc aggtctccga cctgcccgal gtgggtcttc 240
ccgggcgggc gctcga 256

```

<210> 166

<211> 332

<212> DNA

<213> Homo sapien

<400> 166

```

agcgtggtcg cggccgaggt caggacccc gccagacct gcggtgacct caagatgtgc 60
caactctgact ggaagagtgg agagtactgg alttaccoca accaaggctc caacctggat 120
gccatcaaaag tcttctgcaa catggagact ggtgagacct ggtgltaccc caactagccc 180
agltgaggccc agaggaatlg gtcacacagg aagaaccccc agaacangag gcatgtctgg 240
ctcgggagga gcatgaccca tggatctcag ttcgagtlak ggggccaggg ctccgacct 300
gcgatgttg acctgcccgg ggggcgctc ga 332

```

<210> 167

<211> 332

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature
 <222> (1) ... (332)
 <223> n = A, T, C or G

<400> 167
 tagagcgggc gcccgggcag gtccacatcg gcagggtcgg agccctggcc gccatactcg 60
 aactggaaac catcggtcat gtctctggcg aaccagacat gcctcttgc cttgggggttc 120
 ttgtatgagc accagttctt ctggggccac ctgggtcag tgggttacc gcagggtcttc 180
 ccantctcca tgttgcaaac gactttgacg gcatacagc tggagccttg gttaggggtca 240
 atccagtact ctccactctt ccagacagag tggcaactct tgaggtcacg gcagggtggg 300
 ccgggttctt tgaactcgtt cgggaccacg ct. 332

<210> 168
 <211> 276
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1) ... (276)
 <223> n = A, T, C or G

<400> 168
 tagagcgggc gcccgggcag gtctctctca gaggcglacg tgttcttatt gccctggcag 60
 cctccataga tnaagttatt gcangagtc ctctccacgt caaaglacca gcctgggaag 120
 gatgcacggc aaggccacgt gacttgcattt ggggtgcagc attcttcata gttagacata 180
 tagatggagc ggaattccagc atcttgcctt ctgggaacac ttgggacaga ggaatccgt 240
 gaattcttgc tgggtgactt cggccgcgac caggt 276

<210> 169
 <211> 276
 <212> DNA
 <213> Homo sapien

<400> 169
 aaggtggtcg cggccgaggt ccaccagcag gaattgcagg gattctctcg tcccaagtcg 60
 tccagaagg caggattctg aagaccacac cagcgatatg ttcacatag nagaatactg 120
 cactgcacac gcaattcactg ggccttgcgc tgcatacttc ccacgtcgtt actttgacgt 180
 ggaaggggnc tcttgcata acttcattta tgggtgctgc cggggcaala agaaacagtc 240
 ccgtctcgag gaggacctgc cggggcggcc gctcga 276

<210> 170
 <211> 332
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1) ... (332)
 <223> n = A, T, C or G

<400> 170
 tagagcgggc gcccgggcag gtccacatcg gcagggtcgg agccctggcc gccatactcg 60
 aactggaaac catcggtcat gtctctggcg aaccagacat gcctcttgc cttgggggttc 120
 ttgtatgagc accagttctt ctggggccac ctgggtcag tgggttacc gcagggtcttc 180


```

ccattctccc tghttcagaa gactlllqgtg gcattccaggl tncagcettg attgggggtca      240
atccagtaact otccactett mungccagaa tggcaatctt tgaggtcanc gcanagtgcgg      300
gcgggggttct tgacctcggc cngagccacg el.                                     332

```

<210> 171
 <211> 333
 <212> DNA
 <213> Homo sapien

```

<400> 171
agcgtggtcg cggccgaggt ccaagaaaccc cggccgcacc tgccttgacc kcaagatgtg      60
cactctcttgc tgnnagagtg gagagtaactg gactnaccoc aaccaagggt gcaacctgga      120
tgccatcaaa gtcttctgca acatggagac lggtagagacc tgcgtgtacc ccactcaguc      180
cagtgtggcc cagaagaact ggtacatcag caagaacccc aaggaacaag ggcctgtctg      240
gcttcggcgag agcatgccc atggattcca gtteagtar ggcggccagg gctccgaccc      300
tgcgatgtg gacctgccc gggggcctg cgg.                                     333

```

<210> 172
 <211> 527
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)... (527)
 <223> n = A, T, C or G

```

<400> 172
agcgtggtcg cggccgaggt cctgtcagag tggcaactgg agaagntccc ggaacccctga      60
actgtcaagg lcttctcttc gtcacacacg gatgacatga atgtatgtac tcagaagtgt      120
cctgnantgg ggcccatgan atggttgnct gaaagagagc ttcttgtctt acatctagcc      180
ggtatggtct tggccatgc cttatggggg tggccgttgn gggcggcttg gtccgctaa      240
aaccatgctc clcagagccc atttcttccc caacactggg tctctgacca naagtcccag      300
gaaactgcat accatttcca gtgtcatacc caggcctggt gacgaagggg gtcttttgaa      360
ctgtggaagg aacatccaag atctctgntc catgaagatt ggggtgttgg aqggttacc      420
gttggggaag ctgcctgtct tttctctccc antcagggc tgcctcttct gaattattct      480
cagggcacatg acataacttt tatctctggt tcccggttcc aggcacag      527

```

<210> 173
 <211> 635
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)... (635)
 <223> n = A, T, C or G

```

<400> 173
tcagagcggcc gcccgggcaq gtccaccaca cccatttctt tgotgggtat atggcagccg      60
ccacttccc ggattaccgg ctacatcatc aattatgaga agcctgggtc lctctcagga      120
gaagtgggtcc ctggccccc cctgggtgta ccagaggcta ctattaclyy cctggaaccc      180
ggaaccgaat atacaattta tgtcaktgcn ctgaagaata atcagagun cgaacccctg      240
attggaaggc aaaaagacga cgaacttccc caactggtaa ccttccaca ccccaattct      300
catggacccg agctcttggg tgttctctcc acagltcana agaccccttt cgtcaccac      360

```

```

cctgggtatg acaactggaaa tggatttcag cttctctggca cttctgggca gcaaccacgt      420
gttgggcaac aatgatctt tgggggacat ggnittagge ggaacacccc ggcacacacg      480
ggcaccacaa tggggcatng gcaagaaca taccogncga atgtaggaca agaagccctn      540
tctccacaa ncatctcatg ggcacacac cangacactt ctgagiacat canttcatgg      600
catctgggtg gcactgataa aacacattac agtla      635

```

<210> 174
 <211> 572
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(572)
 <223> n = A,T,C or G

```

<400> 174
agcgtggtcg cggggcaggt cctgtcagag tggccttgtt agaagttcca ggaaccctga      60
actgtaagggt ttcttcatca ggcacaacag gataacatga aatgatglaa tcaagagtgt      120
cctgggaatgg ggcacatgag atggttgctt gacagagaga tcttctctct acattcgccg      180
ggtatgggtc tggcctatgc ctatggggg tggccttctt ggggctgtg gtcgcctaa      240
aacctatctt ctcaagatc atttcttgc caacacatgg ttgtgacca gaagtgcacg      300
gagctggnat accatttcca ggtcctatc caggctggtt gacgaaggg gttcttctga      360
ctgtggaagg aacatccaaag atctctgtt catgaagatt ggggtcttgg aggtttacca      420
gttggggaag ctgctctgtc tcttctctt caatcanggg ctggtctctt tcatattct      480
tcagggcatt gacatcaatt ctatattcgg ntcccggtt cagcaataa taataacct      540
ctgtgacacc anggcggggc cgaagganca ct      572

```

<210> 175
 <211> 372
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(372)
 <223> n = A,T,C or G

```

<400> 175
agcgtggtcg cggccgaggt cctcaccaga ggtaccacat acaacatcat agtgggggca      60
ctgaaagacc agcagaggca taagggtcgg gaaagaggtt ttaccgtggg aaactctctt      120
aacgaaggct tgaacacacc taccgataac tctgtctttt acccctacac agtttcccat      180
tatgacatgg gggatgagtg ggggagatg tctgaatcag gcttttaact gttgtgacag      240
tgtctangct ttggaagtgg tcatctcaga tctgaltcat ctgagtggtg ccattgacaat      300
ggtgtgaact acaagattgg agagaagtgg gacgttcagg gagaaatgg accagacacg      360
ggggcctctc ga      372

```

<210> 176
 <211> 372
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(372)

<223> n = A, T, C or G

<400> 176

tcgaagcagcc	ggccgggacg	gtccattttc	tcctgaagg	tcacacttc	ctccacttc	60
gtagtccaca	ccattgtcat	ggcaccakct	agatgaac	catctgaat	gaccacttc	120
aaagcctaag	cactggcaca	aaattttaaa	gcctgottca	gacattcglt	ccactcacc	180
tcgaagcagcc	taattggaaa	ctgtgtagg	gtcaagcac	gagtcctcc	taggttggt	240
caagccttcg	ntgacagagt	tgcctacggt	naaacctcl	tcacgaact	taigcctctg	300
ctggtcttcc	agtgcctcca	ctatgatgt	gtaggctgca	cctctggtga	ggacctcggc	360
cgagaccag	ct					372

<210> 177

<211> 269

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(269)

<223> n = A, T, C or G

<400> 177

agcgtggccg	cggtccgaggt	ccattggctg	gaacggcctc	naattggaag	ccagtgalcg	60
tctcagcctt	ggttctccag	ctaattggtg	tgggtgtctc	agtagcatct	gtcaccagcg	120
cccttcttgg	tgggttgaca	ttctccagag	tggtgacaac	acctgagct	ggltctgctg	180
tcgaagtgtc	cttaagagca	tagacaccca	cttcattatt	ggcgacacac	ataagtccg	240
atacagacac	ggatgagctt	gtcaggaac				269

<210> 178

<211> 529

<212> DNA

<213> Homo sapien

<400> 178

tcgagcggcc	gcctgggacg	gtcctcagac	cggtttctga	gtacacagtc	agltgltgltg	60
cccttcgacga	tgcctgggag	agccagggcc	tgaattggaac	ccagltgacac	gotatttcctg	120
ccacacacac	ctggaagttc	actcaggtca	cacccacacg	actgagcgcc	cagtcggacac	180
cccccattgt	tcagctcact	ggatatcgag	tgcyyttgac	ccccaggag	agagccggac	240
caatgaagga	aattcaacct	gtcctcgaca	gtcctcctgt	ggttgtatca	ggacttatcg	300
cggtccacac	atctggaagt	atggtctatg	ctcttaagga	cccttggac	agcagaccag	360
ctcaggtgtg	tgtcaccact	ctggagaatg	tcaggtccac	aggaagggt	cgtgtgacag	420
atgctactga	gaccaccatc	accattagct	ggcgacacaa	gactgagacg	atcactggtct	480
tccaagtga	tgccttcca	gccaalggac	ctcgcccgcg	accacgctt		529

<210> 179

<211> 454

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(454)

<223> n = A, T, C or G

<400> 179

```

agcgttggtcg cggccgaggt ctggccgaac lqccagtgtg cagggaagat gtacatgtta      60
tagntcttct cgaagtcnng gncceguagc tccacggggt ggtctctctc ctccaggcgc      120
ttctcattct catggttctt cttcaccgcg agcttctgct tctcagtcag aaggttggttg      180
tctcctccc tctcctacag ggtgaccagg acgttcttga qccagtcccc ccttgcaggg      240
gggaattcgg tccagctcag qtcacggcaa ggggggatgt atttgcaagg ccgatgttag      300
tccaaagtga gcttgtggcc cttcttgggt cctccaagg tgcantttgt ggcaaagaaq      360
tggcaggaag agtcgaaggt cttgttgtna ttgctgcac ctttctcaaa ctctgcaatg      420
ggggctgggc agacctgcct gggcggccgc tcga

```

<210> 180

<211> 454

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(454)

<223> n = A,T,C or G

<400> 180

```

tcgagcgggc gcccgggcag gtctggcccag cccccccttg cgagtttgag aaggnatgaa      60
gcaatgacaa caagaccttc gactcttctt gccccttctt tgcacacaaa tgcacccctg      120
aggggcacaaa gaggggccan aagcttcacc tggactacal cgggccttgc aaatacatcc      180
ccccttgctt ggaactctgag ctgacccgaa tccccctgag catgcgggac tggctcaaga      240
acgtctctgt caccctgtat gagaggggat agyacaacaa ccttctgact ggggagucana      300
agctgcgggt gaggaaatc calgagatg aanaagcctt gnaagucaga gaccaccccg      360
tggagctgct ggcocgggac ttcgagaaga actalaccat gtacatcttc cctgtacact      420
ggcagttcgg ccagacctcg gcccgagaca nact

```

<210> 181

<211> 102

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(102)

<223> n = A,T,C or G

<400> 181

```

agcgttggtg cggacgagc ccacaaagcc attgctctga gttttanttc agctgcaaan      60
aataccncca gctccacct cactaaccag catatgcaga ca

```

102

<210> 182

<211> 337

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(337)

<223> n = A,T,C or G

<400> 182

```

tcgagcgggt gcccgggcag gtctgagcgg atagcannng gcatnttttg gaatggatga      60

```

ggtctggcag	cctgagcagc	ccagcagagg	cttggcctca	gttgagcaat	ttggcctagg	120
ggatcctatg	cagcagcgtt	ctgagctctg	ggcctagctg	ccatgagga	acctgagga	180
ggcctggct	ggtanggtt	gattacagg	ctgggaacag	ctcgtacat	tgccattctc	240
tgcatatact	ggttagtgag	gagagcctgg	cgtctctctt	tggttagtgc	taaagctaca	300
tacatctgct	ttgaggacct	ggcgcgcgac	cagcctc			337

<210> 183

<211> 374

<212> DNA

<213> Homo sapien

<400> 183

ctggcgcggc	ggcgcggcag	gtccattcct	tccttgagg	tcctcctcct	cttgcctctt	60
gtagtctcag	ccctctgctc	gacacccat	agatgaatc	cctctgagat	gacacctctc	120
aaagcctaa	cactgagcag	acgttttaa	gctgattc	gacattcgtt	cccactcctc	180
tcacacggc	taattgggaa	cgtgttagg	gtcagagc	gagtcctcct	taggttggtt	240
ccagctctc	ttgacagag	ttgcctcag	taacacctc	ttcccgagc	ttatgctctc	300
gctggtctt	ccctgagc	cctctctg	ttgttaggtg	cactctggtt	gagcctctct	360
gcccgcagc	cgt					374

<210> 184

<211> 375

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(375)

<223> n = A, T, C or G

<400> 184

agcgtggtt	ggcgcgcagg	tcctcaccan	aggtgcac	taacacctc	tgctgaggg	60
actgaaagc	cagcagagg	acaaggtct	ggagaggtt	gttaccgtg	gcaactctgt	120
ccagcaggg	ttgagcagc	ctacagagc	ctcgtgctt	gacccctaca	cagttctcca	180
ttatgcctt	ggcgttgagt	gggagcagc	gtcgaatc	ggctctcagc	tgctgaggg	240
gtgcttgc	tttggaagt	gcaattctc	atgtgagc	tgctgaggt	gtcctgagc	300
tggtgagc	tacaagatt	gagagagtg	gacacctc	gggagagag	ggacctgccc	360
ggcgcgcag	cgc					375

<210> 185

<211> 148

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(148)

<223> n = A, T, C or G

<400> 185

agcgtggtg	ggcgcgcagt	ctgcttctc	gtcaggtgc	tgctcctgag	ccatcaggg	60
caataagcg	ccgctatgc	ccctgattg	gallgagcag	cgtctcct	tgctgagc	120
ttgctgagc	tgagagagc	gattgagc				148

<210> 186

<211> 397
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(397)
 <223> n = A, T, C or G

<400> 186
 tcgagcggcc gcccgggcag gtccaattga aacaaacagt tctgagaccg ttcttccacc 60
 actgattamg agtggggngg cgggtattag yyataatatt catttagcct cclgagcttt 120
 ctgggcagac ttggttgccl tggagagctcc agcagccctc tgggtccactg ttgtgatgac 180
 accanccgca actgtctgtc tcatatcacc aacagcaaag agaccacaaag gtggatagtc 240
 tgagnagctc tcaacacaca tgggcttgcc aggaacata tcaacaatgg gcagcatcac 300
 cagacttcac gaatttaagg gcaatcttcc agctttttac cagaacggcg atcaatcttc 360
 tccctcagct cagcaaatct gcatcgaatg tgagccg 397

<210> 187
 <211> 584
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(584)
 <223> n = A, T, C or G

<400> 187
 tcgagcggcc gcccgggcag gtccaattga aacaaacagt tctgagaccg ttcttccacc 60
 ccactccaat tcttggccgc tcaactctg gaaacttcc taccagatc caggcagcct 120
 tccgggagcc accgcttctt gtggntactg accccagggc tggagaccctg cctctcaccg 180
 aggcattctt tgltaaccca cctaccattg cgcctgtctan caccagattct cctctgogct 240
 atgtggacat tgcactccca tgcacacaaa agggagctca ctcagngggg ttgtatgtgg 300
 tggatgtctg ctggggaagt tctgcacatg cgtggcacca ttctccctga accacatctg 360
 gaggacatct ctgatctgga cttctacaga gatctctgag agattgaana agaagaacag 420
 gctgnttctg gannacacaa tggacacaaa angaarttc angggtgaaa nngactctc 480
 ccgtctctga attcaactgt cctcaactct angntgcaga ctggtcttga aggttgcacaa 540
 gggccctctg ggcctattta agcancttcc gtccgcagaa cgt 584

<210> 188
 <211> 579
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(579)
 <223> n = A, T, C or G

<400> 188
 agcgtgngtc gggcgccagg tcttgagtag gcacagaggg cactgtgaca ccttccagac 60
 agtctgcaac ctcaggctga gtgacatga actcaggagc gggagcagtc cattccctct 120
 gaattctctc ctgggcact gcttctcag cagcagctg cctctttttt tcaatctctt 180
 caggatctct ttagagagac agatcaggca tgaactccca tgggtattca cgggaaatgg 240

tgccacgcac	qccgcagaaat	tcccgagcca	gcctccacca	caccacaccc	atcgggtgag	300
ctccattggt	gttgcatggg	atgggcaatg	tccacatagc	gcaggagaga	atctgtgtta	360
cacagcgcca	tggtaggtag	gttaccatag	gatgcctccg	cgagaagctg	gtggtcagcc	420
ctgggggtca	gtaccaccca	gacgcctggg	ctcccggaag	gctgcctgga	tctgggtagt	480
gaaggntcca	ggagtgaagc	ggccacacat	tggagtggcl	gacgagagag	gcagcaaat	540
tcacacacag	cctctggac	ctgcccgggc	gacgctcga			579

<210> 189

<211> 374

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(374)

<223> n = A, T, C or G

<400> 189

lccaggggac	gcccgggcag	gtccattllc	tccctgacgg	cccccttct	ctccaatctt	60
gtagttccca	ccctttccct	ggcaccctct	agatgaalca	ctctgcaat	gaccacttcc	120
aaagcctaag	cactggcaca	acagttttaa	gccttattca	gacattcggt	cccccttcca	180
tccacgggca	taatgggaaa	ctgtgttagg	gtcnaagcac	gagtcctcag	tangttggtc	240
caagctttcg	ttgacagagc	tgccacgggt	acacacacac	tccccaagcc	ttatgcctct	300
gctgggtttt	cagngcctcc	actatgatga	lghanggggg	cacctctgga	gaggaactcg	360
gcccgagcca	cgt					374

<210> 190

<211> 373

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(373)

<223> n = A, T, C or G

<400> 190

agcgtggtcg	cgcccgaggc	cttaccacga	ggtgcacact	acaacatcat	agtggaggca	60
clgaaagagc	agcagagcga	taaggtcggg	gaagaggttg	ttaccgtggg	caactctgic	120
acacagaggt	tgaacacacc	taaggatgac	tcctgctttg	acccctacac	agtttcccat	180
tatgcctgtg	gagatgagtg	ggaacgaalq	tctgaatcag	gcttttaact	gttggtccag	240
tgtttanget	ttggaagtgg	gctatttcag	atgtgallca	tctagatggc	gacctgacac	300
tggngngaac	tacagagctt	gagagaagtg	gnaacgncag	ggagaaaaty	gacctgacac	360
ggcagagcgt	cga					373

<210> 191

<211> 354

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(354)

<223> n = A, T, C or G

<400> 191

agcgtgggtcg	cgccnaggt	ccacacagga	agggtcggag	ccctggccgc	catactcgaa	60
ctgggaakcca	tgggtcatgc	ctctggccgaa	ccagacatgc	ctcttgtcct	lugggttctt	120
gctgatgtac	cagttctctt	gggccacac	gggtgagtg	gggtacacgc	aggtctcacc	180
agtctccatg	ltggcgaaga	cttgggtggc	atccagggtg	caaccctggg	tggggtccat	240
ccagtactct	ccactcttcc	agccagagtg	gcacatcttg	aggtccgggc	aggtggcgnc	300
gggggntttt	ggggctggcc	tctggnettc	gggtgtcttc	natctgtctg	ctca	354

<210> 192

<211> 587

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)... (587)

<223> n = A,T,C or G

<400> 192

lccagcggcc	gcccgggcag	gtctcgaggt	cgcactggcg	atgtctgtcc	lgttggrocc	60
cccgcccttc	ccggacclcc	lggccctctt	ggctcclcca	ggctggllll	cgactcagc	120
ctctgcctcc	agccacctca	agagaaggct	caggtatggt	gccgclacta	ccgggttgai	180
galcccautg	tgtttcgtga	ccgtgacctc	gggttggaca	ctccctccaa	gagcclgggc	240
cagcagatcg	agaacatccg	gagcccgagg	ggcagntccc	agcaccocgc	ccgcunetgc	300
cgtgacctca	agclgtggcc	ctctgacttg	aaggttggag	agtactggai	tnaccccaac	360
caagctgcaa	cctggatgcc	atcaaagtct	lctgcaacat	ggagacttgt	gagacctgcy	420
tgtaccctac	tcagcccggt	gtggcccgaa	agaacttgta	ctccagccag	aaccccaagg	480
acaagcagca	lgtctgttgc	ggcgagaaca	tgacncttg	attccagttc	gagclctggc	540
ggcagggtct	cgaccttgcc	gatggggacc	ltggccggca	acacgcl		587

<210> 193

<211> 98

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)... (98)

<223> n = A,T,C or G

<400> 193

agcgtgggng	cggtccgggt	atcactatcc	agccatacl	ctccctccac	acgtcganag	60
atgaagctgl	ccaaagatct	cagggtggan	aaaaacal			98

<210> 194

<211> 240

<212> DNA

<213> Homo sapien

<400> 194

tcgagcggcc	gcacggggag	gtctclccga	cttggactgl	gtccactgc	cagggttccg	60
gggtcccaac	ltgcagacgg	ctcttctgtg	gacagtctct	gtatccgca	aagcaaccl	120
ggagagcttg	ggggaaaaca	ccatgggttt	ctccacctg	agatctttga	acacttctat	180
ctctcagcgt	gcggaggggag	gtcttgactt	ggatatttct	acctcggccg	cgaccacgct	240

<210> 195
 <211> 400
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)... (400)
 <223> n = A,T,C or G

<400> 195

cgagcggggg accgggcagg tncagactcc	salucanana accacaaagc cagalgtcag	60
aagctacacc atcacaggli, tacaaccagg	ccctgactac agancctacc tgcacacctt	120
gcatgacccat gctcggagct cccctgtggt	cctcgacccc tccactgcca ttgatgcacc	180
atcacaacctg cgtttcctgg ccacccaccc	caatttccttg ctggatccct ggcagccccc	240
acgtgccagg attaccggta ccttcctcag	takanaagc ctgggcctcc tcccaagaaa	300
ggggtccctc ggcccccacc tntgtccca	acggctacta ctactqngcc ngcaccgggc	360
aaccgatata ntttttqna ttggcctta	acaataatla	400

<210> 196
 <211> 494
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)... (494)
 <223> n = A,T,C or G

<400> 196

agcgtggttc ggggcagang tccgtgcaga	gltggcactgg tagaagllcc aggaacctg	60
aactgtaagg gttcttcate agngccaccc	ggatgacavc aacttcatgta ctccagaagtg	120
tccctggaatg ggggacatga gcttggttgc	tgagagagag ctctctgccc tgtcttttcc	180
cltccaactca ggggctcctt ctctctgatt	ttcttcaggg caatgacata aaltgctat	240
tccggtcccg gntccagccc agtaatagta	acctctgtga caccacgggc gngccagagg	300
accacttctc tgggaggggg ccttcagcttc	tcatacltga tgatgtaacc ggtaatcccg	360
gcacgttggcg gctgcaatga tccagccaag	gaatctgggt gtggtggcca ggaacacgca	420
tttqatggg gcatcaatgg cagtggaggg	cgtcgatgac caccggggga gctccgacat	480
tgtcattcaa ggtg		494

<210> 197
 <211> 118
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)... (118)
 <223> n = A,T,C or G

<400> 197

agcgtggncc cggccgaggt gcagcgcggg	ctgtgcacac ctctgctctc tgcocaaaga	60
taaggagggt acctgcccc aggagaacct	taactntccc cagctcggcc tctgcagg	118

<210> 198

<211> 403
 <212> DNA
 <213> Homo sapien

 <220>
 <221> misc_feature
 <222> (1) ... (403)
 <223> n = A,T,C or G

<400> 198
 tcgagcggcc gcccgggcag gtttttttgg ctgaaagtgg ntactttatt ggttgggaaa 60
 gggagaagct gtggtcagcc caagagggaa tacagagacc cgassaaaggg tagggcaggt 120
 gggctggaac cagacgcagc gccagggcaga aactttctct cctcactgct cagcctggtg 180
 ghggutggcg ctccnnaatt gggagtgcac caggacacct tcccacagcc attgcccggg 240
 catttcattt ggcacaggaca ctggctgctc acctggcacl ggtcccgaca gaagcccggg 300
 ctgggggaaag ttaattgtca cclgggggca ggaacnctcc ttatcattgn gcagagagca 360
 gaaaggtggca gaccccgccg tgcacctcgg ccggtgacac gct 403

<210> 199
 <211> 167
 <212> DNA
 <213> Homo sapien

 <220>
 <221> misc_feature
 <222> (1) ... (167)
 <223> n = A,T,C or G

<400> 199
 tcgagcggcc gcccgggcag gtccaccata agtctctgata caaccaaggc tgagctgtca 60
 ggagcaaggt tgatttcttt cattggctcgy gnetctctct tgggggncac tggccctcga 120
 tctccctgtg gttgagacatt gggggggctc cactgggggc tggggct 167

<210> 200
 <211> 252
 <212> DNA
 <213> Homo sapien

 <220>
 <221> misc feature
 <222> (1) ... (252)
 <223> n = A,T,C or G

<400> 200
 tcgagcgggt cggccgggca ggtccaccac acccaattcc ctgctgggat catggcagcc 60
 gccacgtgcc aggattaccc gctacatcat caagtatgag aagcctgggt ctcctccag 120
 agaagcggtc cctcgccccc gccctgggtg cacagaggct actattactg gtttgggaac 180
 ggggaacgaa tatccatttl atgtcattqn cctgaagaat aatnnaaan agtgcacccc 240
 tgaattggag ga 252

<210> 201
 <211> 91
 <212> DNA
 <213> Homo sapien

<400> 201

agcgtggtcg	cgcccgaggt	tgcacaagct	tttttttttt	tttttttttt	tttttttttt	60
tttttttttt	tttttttttt	tttttttttt	t			91

<210> 202

<211> 368

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> {1}...{368}

<223> n = A,T,C or G

<400> 202

tgcagcggnc	gcccgggcag	gtcctgcacac	ccccagattc	cccccccgcc	cacacacac	60
gttcagtggt	ggcgaggtac	cagcaaatac	cgtgcacatc	ggttggacgt	ggcgantttc	120
tcttggggt	cagagtgttg	tactcgtaaa	acacaggtca	tcatgtttgt	ctacaatgca	180
tataataacg	agctggttcg	taccaagacn	ctggtgaaga	atcgcatcgt	gtcctcgcac	240
agcaccacgt	accgacagtg	gtacaggttc	cactatggcg	ctccctggcg	ccgcagggag	300
gggtccacgc	tgaactctga	ggagagaagag	attttttttt	aaaaacgac	taaaacacac	360
aaaacaat						368

<210> 203

<211> 340

<212> DNA

<213> Homo sapien

<400> 203

agcgtggtcg	cgcccgaggt	gaaatggtat	tcagcttctc	ggcacttttg	gtcagcacc	60
cagtgtttgg	caacaaatga	tctttgagga	acatggtttt	ggcgagacac	cacccgccac	120
aaagggacac	ccataaagcc	ataggccaa	acacacacac	cagaatgtag	gacacgaagc	180
tctctctcag	acacacatct	ctcggggccc	attccaggac	acttctgagt	acatcatttc	240
atgtcatctc	gttggcactg	atgaagaacc	cttaccgttc	aggtttcttg	ggcctttctc	300
cagtgcacac	ctgacaggac	ctgcgccggc	ggcggttcgc			340

<210> 204

<211> 341

<212> DNA

<213> Homo sapien

<400> 204

tgcagcggcc	gcccgggcag	gtcctgtcag	agtggcactg	gtagaggttc	caggaaccct	60
gaactgtacg	ggtttttcat	cagtgcacac	aggtttacac	gaaatgatgt	actcagaagt	120
gtcctggat	ggcgacacac	gtacagttct	ctgagagaga	gcttcttgtc	ctacattcgg	180
cgggtatggt	cttggcctat	gcattatggg	ggtggccggt	gtggcgagtg	tgttcacact	240
aaaaccatgt	tctcaaaaga	tcatttgttg	cccaacacac	gtttgtgtac	cagaagtggc	300
aggaagctga	atcagatttc	actcggggac	agacacacgt	a		341

<210> 205

<211> 770

<212> DNA

<213> Homo sapien

<220>

<221> misc feature
 <222> (1)... (770)
 <223> n - A,T,C or G

<400> 205

togagcgggc	gcccgggcag	gtctcccllc	ttgcgggccc	ggggcagcgc	atagtgggac	60
tctgaccact	gtcggtagcg	tgtgntntcg	atgagcagca	tgcaattctt	caccagggtc	120
ttggtacgaa	ccagctcgtc	altagatgca	ttgtagacaa	calcquatgat	ccttgttttc	180
cgagtccanc	actctgagcc	ccaggagaaa	ctcccccagc	ccaaacctcag	ggcaggggtat	240
ttcttggtac	ctcccccgcac	acggacclctg	tggatgcggc	gggggccaag	ctgactcctg	300
agggagagga	gattttazac	axxxanogat	ctaaaaaat	tcagagagaa	tatgatgaaa	360
ggaaaaagan	tgcnaaatc	ngcagttctc	lqragggagca	gttccagcag	ggcaagcttc	420
ttgcgtgcac	cgcttcaagg	ccgggagaggt	gtgaccgggc	ngatggctat	gtgctagagg	480
gtaxagagag	ggagttctat	ctlaxagaaa	tcaggggcca	gaatggctgg	tcttcaacta	540
atccaaaggg	gaggttctag	gaggtgcaat	cagcaaaaac	atlgagactg	ntggccaat	600
ttattgggtg	agggcttgca	cantangan	ggctgggtct	lqgggcttgg	attgggagaa	660
gctttggcag	ccttttcttt	ggttttgc	aaaaccttll	gntgaagang	anaacctaggg	720
cggaagcccll	aaccgatcc	acnccggggg	gggttclhang	gnoccncttg		770

<210> 206
 <211> 810
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)... (810)
 <223> n = A,T,C or G

<400> 206

agcgtgggtc	cggccggggt	ctgctgcttc	agcgaagggt	ttctggcata	accaatgaca	60
aggttgccaa	agactgttcc	aataccagca	ccagaaaccag	ccactctctac	tgttgccagca	120
cctgcaccaa	taaatctggc	agcagtatca	algtctctgc	tgattgcaat	ggclclgaaac	180
tccttttggg	ltaggclgag	cacacatttc	tgggcccctga	tlcllctttag	aragaaatcc	240
aactctttgc	cctctatgac	atagccatct	gtcgggtcc	actgtaccgg	ccttggaagcg	300
atgcaagcaa	gaaacttgcc	ctgctggaac	tgclccctcca	ggagactgct	gattttggca	360
ttctttttcc	tttcatcata	tttcttctga	alvtttttag	atcgttttll	gtllaaaxllc	420
lcltcttclcl	caggagctcag	cttggcggcc	gcgcgcatcca	cacagggaggt	gtgagggaggt	480
gtcaacagaa	ataccgtgac	ctgaggttgg	acgtggggga	tttctcctgg	ggctcagagt	540
ggtgtactcg	taaaacaaag	accatcgatg	gtgncclccc	tgcataaat	aacgagctgg	600
gtcggaccca	aagaacctgg	ngaanaaatg	gntggnctca	tcgacaggac	accgtacccg	660
acagggggac	gaolccnact	atgccccltgc	ccctggggccg	caaaaaagga	aaactgccc	720
ggcggccctc	gaagagccca	ttntggaaaa	aatccatccc	actggggnggc	cngtcgagca	780
tgcantana	ggggcccat	ccccctnann				810

<210> 207
 <211> 257
 <212> DNA
 <213> Homo sapien

<400> 207

togagcgggc	gcccgggcag	gtcccccacc	agggclgcaa	actggatgcc	atcaaggtct	60
tctgcaacat	ggagactggt	gagacctgcy	lqtaacccac	taagcccagc	gtggcccaga	120
agaaatgggt	catcagcaag	aaccccang	acnagaggca	tgtctggttc	gtccagagaa	180
tgaccgatgg	attccagttc	gagtalggcg	gcaggggctc	cgacactgcc	gatgtggaac	240

tcggcgcgcga ccacggt

257

<210> 208

<211> 257

<212> DNA

<213> Homo sapien

<400> 208

aggtgtgctc	cgcccgaggt	ccacatcggt	agggcggag	ccctggccgc	catactcgaa	60
ctgggaatcca	tcggtcatgc	tctccgcgaa	ccagacatgc	ctcttgctcl	tcgggttctt	120
gctgatgtac	cagttcttct	gggcacacat	gggclgagt	gggtacacgc	aggtctcacc	180
agcttccctg	ttgcagaaga	ctttgatggc	alcacagttg	caagcttggc	tcgggggctg	240
cccgggcggc	cgtcga					257

<210> 209

<211> 747

<212> DNA

<213> Homo sapien

<220>

<221> misc feature

<222> (1)...(747)

<223> n = A, T, C or G

<400> 209

tcgagcggcc	gcccgggcag	glcnaacac	cccaattctt	lgclggtatc	atggcagccg	60
ccacgctacc	ggattacgg	ctacntcatc	aagtatgag	agcctgggtc	tcctcccgag	120
gaagtggctc	ctcgccccc	ccctgggtgc	acagagctc	ctattactgg	cctgggaaccg	180
ggaaaccgaat	atacaatita	tgctattggc	ctgaagaata	atcagaagag	cgaagccctg	240
atcggaagag	ggagacag	cgagcttccc	caactggtaa	ccclccgac	ccccatctt	300
catggaccag	agatcttgg	tgctcttccc	acagttccaa	agaccccttt	cgtcaccac	360
ccctgggtatg	acactggaaa	tggtattcag	cttccclgca	ctcttggtca	gcaacccagt	420
gtttgggcaac	aaatgatctt	tgaggaaat	ggttttggc	ggaccacacc	gccacacacg	480
gccacacac	lgaagcclag	gcacagac	tcacccgcga	atgtaggata	agaaatcttt	540
luteanacac	catntnatgg	gcacattccc	aggacacctc	lgatucac	atttatgnc	600
tctgtggcac	ttgatgaaa	cccttacagt	tcaggglct	ggacctttta	ccaggectnc	660
tacaggactn	ggccggacac	cttaagccna	lunacccctg	ggcgcttcta	agglacaccl	720
cgmccctg	ggaaatgac	tactgtn				747

<210> 210

<211> 872

<212> DNA

<213> Homo sapien

<220>

<221> misc feature

<222> (1)...(872)

<223> n = A, T, C or G

<400> 210

agcgtggctc	cgcccgaggt	ccactagagg	tctglclgac	attgcccagg	cagagtctct	60
gggttacaaa	ctcttaggag	ggcttgctgt	gagggagggc	tgcatgggtg	tgctgcgggt	120
catcatggag	agtgaggcca	aaggctgcg	ggttgtgggt	tctggaacac	tcnagggcca	180
ggagggttaa	attccatgaa	gtttglggat	ggcctgatga	tcacacatcg	gagacatgt	240
ccactactac	cgtctnacc	ctlgclgctc	cccccccttt	ctgctnaac	calaggggtn	300

ntncttgnc	ntcttgggt	ngaanatna	alngcoetnc	enttentanc	ncractngul	360
ccananttg	nttttaana	atcnccttg	cttinnccac	tgttcannth	tttnttctga	420
aacckkatn	nttonattan	atnntnnnn	ntccnccccc	ctcttcattn	ancnatanq	480
ctnnnaante	cttnnancct	cccncccnnt	ncnctentac	tnantcttc	tnnnccatta	540
ennagetott	tenttttana	taotgnngcc	nngetctnca	laketacnat	nnnnnaatn	600
cccccccc	cnanegntt	tttgaccnn	naacccctcl	tcctcttccc	lncnnaaatt	660
ncnnantlcc	ncnttcnna	ntttcggnth	ntcccalnet	ttccannnc	tcantctam	720
ncnctncaac	ttatttttct	ntcckccct	nttclcttca	nncccnctnn	tctaclcnnc	780
nattnccatta	natttgaaac	lncnccnnc	antnccctn	ctctacnntt	ttaktttncg	840
ntcncctctac	nlacckattt	aatnattnt	nn			872

<210> 211

<211> 517

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(517)

<223> n = A,T,C or G

<400> 211

tccagcggcc	gcccgggcag	gtctgccaa	gagaccctgt	talgtnttg	ggactggctc	60
gggatggca	ggcggtctc	gcllccccc	cttctgttct	gagatggggg	tggtgggcan	120
lctctctct	ttgggttcca	ccatgctcac	glggtcagga	aggggttct	lgtggccnnt	180
cttaccagt	gggtcccagg	gcagcatgat	cttcacottg	atgcccgcc	ccccctgtct	240
gagcaacac	tgccgcacaa	gcagtgctca	cgtagtaagt	laccggggtc	tcctctgttg	300
atcctcagc	calccacaaa	cttctctgga	ttagccclcl	gtcctcggag	tttcccagac	360
accnccct	cccgctctt	ggccccacte	tccltqtga	ccgcagcac	accatagcay	420
gcctccgca	caagcaagcc	ctcctaagaa	lctgttaagc	anancctctg	clggccatgg	480
cacscacac	tctagtggac	ctcggnccgc	ccccgcgc			517

<210> 212

<211> 695

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(695)

<223> n = A,T,C or G

<400> 212

ccagacttga	catcatatga	atcatactgy	ggagaatagt	tctgaggacc	agkanggcct	120
gattcacaga	ttccaggggg	gccaggagaa	ccaggggacc	clggkktctc	tggnatacca	180
gggtcacctt	lctctccagg	atccccagga	gggcclcgat	ctcccttggg	gccttgagggt	240
ccttgacct	taggagggcg	agtagggaca	glkgtagggt	gtgggcaaac	tycacaaccl	300
tctccaaatg	gaattttctg	gttggggcay	tctaatttct	gctccgknan	akcttatgtc	360
atcgragaga	acgyslcttg	agtcacnqac	acatattttg	calggttctn	gcttccagac	420
atctctctcc	gncctagggc	lgacccagat	gggaacatcc	tccttcaaca	agcttctgt	480
lgtgcccana	ataatctgtg	gntgaagcag	accggagaagt	ancnagctcc	cctttttgca	540
ccagcctcca	tcctgtctaa	atctcagaca	tcagacttct	ttgggcaaaa	aaggagagaa	600
agaaaaagca	gttcaaaagta	ncnccatcca	agttggttcc	ttgcccttcc	agcaacnagg	660
ccccgttata	aaacacctng	ggccgggaccc	ccctt			695

<210> 213
 <211> 804
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(804)
 <223> n = A, T, C or G

<400> 213
 agccgaggcggc cggccgagggt gttttatgac gggcccggtg ctgaaggggc gggacaacac 60
 tgatggcgct aacttgacct gttttttttt tctccttttt gacacaaagag tctcatgtct 120
 gatatttaga catgatgagc tttgtgcacn aggggagcct gctacttctc gctctgtctc 180
 atcccaactat ttttttgcca caacagggaag ctgttgaggg aggatgttcc catcttggtc 240
 agtctatgc ggtatgagat gtctggaagc cagaaccatg ccaatctatgt gtctgtgact 300
 caggatccgt tctctggat gacataatal gtgacgatac agaattagac tgcacacac 360
 cagaacttcc atttggagaa tcttggtgca tttgcccacn gctcccaact gctcctactc 420
 gacctctcaa tcttccagga cttcaggcc ccaaggcaga tccaggccct cctggtatto 480
 ctgggagaaa tggtagacct ggtattccag gacacccagg gtcacatggt tctcctggcc 540
 cctctggaat cngngaatc atgacctatc gtctctcaaa ctattctccc anatgattca 600
 tatgatgta cctctggggt agtctgtang ganggacacn caggtatttc tggaccacac 660
 ctgcccgggg gggttcgaa agcccgaaat tgcannntn cttccacact ggcggggcgc 720
 gagctgtttt aaaggggcct ttcnccctt. nngngggggg antacactca ctngggggcg 780
 ttttananag cnggctggg aat 804

<210> 214
 <211> 594
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(594)
 <223> n = A, T, C or G

<400> 214
 agcgtggcgg cggccgagggt ccacatcgga aggtctggag ccttggccgc cactactcga 60
 clggaalcca tgggtcatalc tctcggcgaa ctagacatgc ctcttggcct tgggtttctt 120
 gctgatgtac caattctctt gggcaccact gggttgagtg ggttccagc aggtctcacc 180
 agtctccatg ttgcagaaga ctttgatggc atccaggttg cagccttggt tggggtcaat 240
 ccagtactct ccactcttcc agtcagagtg gacatcttg aggtcaccgc aggtctgggc 300
 ggggtctctg cgggtgacct ctgggtctca gctgttctcg atctgctggt caggtctctt 360
 gagggtgggt tccacctcga ggtcaggtc acgaaccaca ttggcatcat cagcccggtc 420
 gtacggggca ccatcgtgag ccttctcttg angctggttg ggcagggaat gaagtccaaa 480
 ccagcgtctg gaggaccagg gggaccsana ggtccaggaa gggcccggtg gggacacaca 540
 ggaacagcat caccagatgc gacctggcag nacctgcccg gctgacctct caga 594

<210> 215
 <211> 590
 <212> DNA
 <213> Homo sapien

<220>

<221> misc feature
 <222> (1)... (590)
 <223> n - A,T,C or G

<400> 215
 tcgagcnnnc gcccgggcag gtctcgcgtt cgcacttctg atgcttggtcc kgttggtccc 60
 gccggccctc ctggacctcc tggkccccc ggctctccca ggccttggtt cgaactcage 120
 ttcctgcccc agccacctca nqogaaggct caxqatggtg gccgclanta ccgggctgal 180
 gatgccaaig kqgttctgtg ccgtgacctc gagggtggaca ccacctcaa gacgctgagc 240
 cagcagatcg agaacatccg gaggccatag ggcagccgca agaaccctgc ccgcaacctgc 300
 cgtgacctca agatgtgcra ctctgactgg aaqatggtg agtactggat tgaccctaac 360
 caaqqctqca acctggatgc catcaaatgc ttctgcaaca kyyagactgg tgagacctagc 420
 gtgtacccca ctacgcccag tytgccccg aagaaclqgt acatcagcaa gacccccaag 480
 gacaaaggag nlgkclqutt cggcgagagc atqacccatg gatctcaqtt caggtatggc 540
 ggcacgggct cccacctgc cgtgtggtg nccggccgc gaccacctt 590

<210> 216
 <211> 801
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)... (801)
 <223> n - A,T,C or G

<400> 216
 tngagcggcc gcccgggcag gntgnnaacg ctggkctctc tggccctctt ggcgaaggctg 60
 gtgaagatgg tcacctctga aaacccggac uacctggtga gagaggagt gtggaccac 120
 aggggtctcg tggcttccct ggaacclctc gacttctctg ctccaaggc attagggga 180
 acactqgtct qratggattg aagggacagc ccggtgctcc kqgttggaan qgtgaacctg 240
 gtgcccctgg tgaasatgga actccaggtc aaacaggagc ccgtgggctt ccgggtgaga 300
 gaggaccctg ttggtgccc tggcccaaac ctnggcctcg accacgctaa gcccgattt 360
 ccagacaccl gngggccggt acbantgcat ccgagctcgg taccagctt ggnlclakia 420
 kqgtcatagc tgtttctctn gtgaattgt tatccgclca caatttcaa cancatcagn 480
 ngccggaaag cataaagtgt aaagccttgg gylactaatg agtgagctaa ctncattaa 540
 attgcttgc gctacclqca cgttcltcca nnggggaaac cntggcctng ccngcllqca 600
 ltaentqaa tccgcnacc ccgggggaaa agnccggttg cngkattcgg gencttttc 660
 cctttctctg gnttaactga nttantgggc tllgncant tcgggttgng gaganccggt 720
 tcacntcac nccaaaggng ghaanaaggc ttccccanaa tccgggggnt ancccaangn 780
 aaacatnng ncnangggc t 801

<210> 217
 <211> 349
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc feature
 <222> (1)... (349)
 <223> n - A,T,C or G

<400> 217
 agcgtggttc gccgtcaggg tclgggccc gggcaccac acgtcctctc kcnccaggaa 60
 gcccacgggc tctgttttg uctggagttc cattttcac aggggcacca ggttcacct 120

tcacccacagg	agcaccgggc	tgtcccttca	atccatncag	accattiglun	ccctaaalg	180
ctttgaagcc	aggaagtcca	ggagllccag	gganccacc	gagacccctg	tggcccaaca	240
actctctct	caccaggleg	tccgggtttt	cacgggtgac	cchttccac	agccctacca	300
ggaggaccag	caggaaccgc	gtaccaacc	lccccgggcy	cccgtccga		349

<210> 218

<211> 372

<212> DNA

<213> Homo sapien

<400> 218

togagcgcc	gcccgggcag	gtccatttla	tccttgacgg	tcacacttct	ccccaatett	60
gtagttacaa	ccattgtcat	ggcannatct	agatgaatca	catctgaaah	gaccacttcc	120
naagcctacg	cactggacaa	ccagtttaaa	gccttgattca	gacattcgtt	cccactcaic	180
tcacacggca	taatgggaaa	ctgcttaggg	gtcaaaagca	qagtcacccg	tagnttggtt	240
caagccttccg	ttgacagagt	lcccccgggt	acacacatct	tcocgaaccl	batgootctg	300
ctggtcttct	agtgcctcca	ctatgatgtt	gtaggtggca	cctctgggln	ggacctcggc	360
cgcgaccacg	ct					372

<210> 219

<211> 374

<212> DNA

<213> Homo sapien

<400> 219

agcgtggtcg	cggccgaggt	cctcaacaga	ggtgccaccl	ccacacatct	agtggaggca	60
ctgaagagcc	agcagagga	taaggttcgg	gaagaggttg	ttacccgtgg	caactctgtc	120
aacgaaggt	tgaaccaacc	taaggatgac	lcytgccttg	acccctacac	aglllccaacl	180
lctgcgcctg	gagagaggtg	ggacagaacl	tcgaatcag	gccttccaccl	cttctgcacg	240
tgcttaggt	ttggaaggtg	tcatttcaag	atgigattca	lctagatggt	gcatgacaa	300
tggtgtgaac	tacaagattg	gagagaagtg	ggaccgllccg	ggagaaaatg	gacctgcccq	360
ggccggccgc	tcca					374

<210> 220

<211> 828

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> {1}... (828)

<223> n = A, T, C or G

<400> 220

tcagagcann	gcccgggcag	gtccagtagt	gccttcggga	ctgggttcac	ccccaggtct	60
ggggcagttg	tcacagcgcc	agccccctgt	gcccacaaag	catgtgcagg	agcaaatggc	120
accgagatat	tcctttctgc	actgtttctc	lccgtgggtat	gtcttcccat	catcplaaac	180
cgttgcctca	tcaggtttac	actlgaattc	tccttttccg	ttcccaagac	atgtgcagct	240
catttggtct	gctccatagt	ttggggaaaag	tttgttcaaa	ctgtgccact	gacctttact	300
tcctccttt	ctactggagc	tttcttacct	tcacattctg	ctgttggtca	aatggtggat	360
cttctatcaa	tttcatggac	agtacccact	lctcccaaac	atccaggga	alagcgtatl	420
cagagcgalt	aggagaacca	aattatgggy	cagaaataag	gggttttcc	acaggttttc	480
ctttggagga	agatttcagt	gggtgacttc	aaagaatact	caacaglgln	ttctccccc	540
tcgcaaaaga	agaaacngla	aatgatggaa	ngcttctgga	gatgcannca	tttaaggga	600
ccccagaact	tcacatclla	caggacctac	ttcaglllac	annaagncac	atantctgac	660

tcacaaagga	cccaagtagc	neccatggnc	gcacttttag	cccttccccc	ggggaanaann	720
ttactttctt	aaacctthgg	ccnngacccc	cttaagncac	atctntggaa	anttccctn	780
cnncggggg	gnnqllcnac	atgcntttta	agggcccaat	tnccccc		828

<210> 221
 <211> 476
 <212> DNA
 <213> Homo sapien

<400> 221	
tcagagggcc	gcccgggcag
gtgtcggagt	ccagcaccgg
aggcgtggtc	ttgtagtgtg
60	
tctccggctg	cccattgctc
lncacactca	cggcgatgtc
gctgggctag	aagcctllga
120	
ccagccaggt	caggtctaac
tggttcttgg	ttatctcttc
ccaggatagg	ggcagggctg
180	
acacctgtgg	ttctcggggc
tgccttttgg	ctttggaggt
ggctttctcg	atgggggctg
240	
ggagggctll	gttggggacc
tgcacttctg	actccttgcc
attcagccag	tectgggtgc
300	
ggccgggtgag	gacgctgacc
acacggtaag	ttctgtttga
ctgtctctcc	ctgtctctcc
360	
tcttggcatt	atgcacctcc
acgcctgcca	cttaccagll
gaacttgacc	tcagggtctt
420	
cgtggctcac	gtccaccacc
acgcatgtaa	cctcagacct
cggcccgagc	cccgct
476	

<210> 222
 <211> 477
 <212> DNA
 <213> Homo sapien

<400> 222	
agcgtggtcg	cggccgaggt
ctgaggttac	atgctgtggt
gtggacgtga	gcacagagga
60	
ccctgaggtc	agttccact
ggtacgttgg	ctgctgtgag
gtgcataalg	ccaaagacaaa
120	
gcccggggag	gagcaglcac
acagacacta	cctgtgtggt
agcgtctcca	ccgtccttga
180	
ccaggaacttg	ctgaatqcca
aggagtacaa	gtgcaggttc
tccacaaag	ccctccagc
240	
ccccatcgag	aaaaccatct
ccaaagccaa	agggccagcc
ccgagaacca	caggllglaa
300	
ccctgcccc	atcccgagg
gagatgacca	agacccaggt
cagcctgacc	tgcttqtrca
360	
aaggcttcta	tccagcgac
atcgcttgg	agtgaggag
caatgggac	tggagagaca
420	
actacaagac	ccagcctcca
ctgcttgaat	cagacacctg
cccgaggggc	cgtctga
477	

<210> 223
 <211> 361
 <212> DNA
 <213> Homo sapien

<400> 223	
tcagagggcc	gcccgggcag
gttgaatggc	tccctgctga
ccaccccggt	gtctgllggtg
60	
ggtacagagc	tccgatgggt
gaaaccattg	ccatagagac
tgccclgtc	caggatgtag
120	
gggccagct	cagtgtatgc
gtgggtcagc	tggtccagcl
lccagtagag	ccgtctcttg
180	
tccagttccg	gtcttttggg
gtcaggagca	tgggtgagca
cagcatccac	tctggtggct
240	
gccccatcct	tctcaggcct
gagcaaggte	agcttgcac
cagagtacag	agagctgaga
300	
ctggtgttct	tgaacaaggg
cataagcag	ccctgaagga
cacclcgacc	gctaccacgc
360	
361	

<210> 224
 <211> 361
 <212> DNA
 <213> Homo sapien

<400> 224	
agcgtggtcg	cggccgaggt
gtccttcagg	gtctgtttct
gcccctgttc	aagagacccc
60	

gtgtcagctc	tctgtactct	ggttgacagc	tgacckctct	caggcctgag	agggatgggg	120
cagccacccg	agtggatgct	gtctgcaccc	alcgtccctga	ccccaaaagc	cctggactgg	180
acagagaggg	gctgtactgg	aggctggagc	agctgaccca	cggctacact	gagctgggac	240
cctacacct	ggacagggac	agtctctatg	tcaatggccl	cacccatcgg	agctctgtac	300
ccacacccg	ccccggggtg	gtcagcgagg	agccalccaa	cctggccggg	cggcggtctg	360
a						361

<210> 225

<211> 766

<212> DNA

<213> Homo sapien

<220>

<221> misc feature

<222> (1) ... (766)

<223> n = A, T, C or G

<400> 225

agcttctgtg	aggcgagggt	cctgtcagag	lggccctggt	agaagttcca	ggasccttga	60
actgtaagg	ttcttctcca	cttccacccg	gctgacatga	aatgatgtac	tcaggagctgt	120
cctggaggtg	ggcccatgag	atggtttgtc	gagagagagc	lclclgclcl	acattctggc	180
ggtatggtcl	lggcctatgc	cttatggggg	tggccgttgt	ggttggttgt	gtccgcctaa	240
aaccatgttc	ctccaaagtc	atllgcllgt	cacacactgg	ttgctgacca	gaagtgcacg	300
gaagctgaat	accattttcca	gtgtcctacc	cagggtgggt	gacgaagggt	gtcttttgaa	360
ctgtggaagg	aacatccaa	atctctggtc	catgaagatt	gggtgttgga	agggttaccg	420
gttgaggag	ctcgtctgtc	tttttcttc	caalcagggg	ctcgtcttct	tgattttctc	480
tcagggcant	gcctaaatc	qlalalclgg	lcccggttcc	aggccagtaa	tagtagcctc	540
tgtgacacca	ggcgggggcc	qggggacct	tctnttgaa	gagaccagct	tctcatactt	600
gatgatgag	cggtaatcc	tggcactgg	nggttgcatg	atnccaccaa	ggaattgggt	660
ggggggggg	ctgcctggcg	gcggttcnca	agcccaclcc	ccacacclcl	gnggggclcc	720
tatggatccc	actcgtcca	acttgggggg	atatggcata	actttt		766

<210> 226

<211> 364

<212> DNA

<213> Homo sapien

<400> 226

togagggcc	ggcggggcag	gtcctttncc	ttttcagcaa	gtgggaagg	gtaatccgtc	60
tcacagaca	aggccaggac	tcgtttgtac	cgtttgatga	tagaattggg	lancgctgca	120
atcgtlgggl	agttcaclclg	cagacagaca	clggccacct	tccggacccc	ctccaggag	180
cgagaatgca	gagtttcttc	tttgcctatc	agcacttcag	ggttgtagat	gttgccattg	240
togaacacct	gctggatgac	cagcccaaa	gagaaggggg	agatgttgag	catgttcagc	300
agcgttggtt	cgttggtctc	cactttgtct	ccagttcttg	tcaggacctg	gcggcgagag	360
cggt						364

<210> 227

<211> 275

<212> DNA

<213> Homo sapien

<400> 227

agcgtggctg	cggccgagg	cttctctaca	gtcctcagga	ctctactccc	tcaggcagcgt	60
ggtgacgclg	cccaccagca	acttgggcac	ccagacctac	acttgtaacg	tagatccaca	120
gcacagcaac	acccgggtgg	acaagagag	lggccccaaa	tttttgtgca	aaactccacc	180

atgcccacccg tgcacccgac ccgaactccct ggggggacccg tccctcttcc tcttcccccg 240
 catccccctt ccaacccctgc cccggcgccg gctcg 275

<210> 228
 <211> 275
 <212> DNA
 <213> Homo sapien

<400> 228
 cgagcggccg cccgggcagg tttggaagg ggatgcggg gaagaggag actgcggtc 60
 ccccccggag ttcaggtgct gggcacggcg ggcaagtgt agttttglen caagatttgg 120
 gctcaactct ctctgcaccc ttggtgttgc tgggcttgtg alctacgttg caggtgkag 180
 totgggtgac gaagttgctg gagggtacgg tcaccacgct gctgaggag lcgactctg 240
 aggactgta; gacagacctc ggcgcgcacc acgct. 275

<210> 229
 <211> 40
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> {1}...{40}
 <223> n = A,T,C or G

<400> 229
 ngtgggttcc ggtcggccag gaccactcct ctctgcaata 40

<210> 230
 <211> 208
 <212> DNA
 <213> Homo sapien

<400> 230
 atcctggttc cggccggagt cccaccllga ctctgcaaa gcaccgalsg ctgcgctctg 60
 gaagcgcaga totgttttaa agtctgagc aatttttgc accagacgt ggaagggaag 120
 ttgcccacac agaagttcag tggacttctg alacgttcta atttcacgga gcgccacagt 180
 accaggacct gcccgggcgg ccgtctga 208

<210> 231
 <211> 208
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> {1}...{208}
 <223> n = A,T,C or G

<400> 231
 tcgagcggcc gcccgggcag gtcttggtac tggggcgcl; ctttcaatta gacgttatca 60
 gaagtccact gaacttctga ttgcgaact tcccttccag cttctggtgc gagaaattgc 120
 tcaggacttt aaaaacagatc tgcgttccg gaggcgagct atcgggtgctt tgcaggaggg 180
 agtgcgggac ctggcgggg accacgcl 208

<210> 232
 <211> 332
 <212> DNA
 <213> Homo sapien

<400> 232
 tcgagcgggc gcccgggcag gtccacctcg gcagggtcgg agccctggcc gcctactctg 60
 aactgggacac catcgggtcac gtctctcgcc aaccagacat gcctcttctc <ctgggggttc 120
 ttgctgatgt accagttctt ctgggccaca ctgggtgag tggggtaaac gcaggtctca 180
 ccagttctca tgttcagaa gacttctctg gcctccaggc tggagccttg gttgggtca 240
 atccagtcct ctcacactct ccagtcagag tggcactct tgggttcacg gcaggttcgg 300
 gcggggttct tgacctcgcc cgcgaccacg ct 332

<210> 233
 <211> 415
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(415)
 <223> n = A, T, C or G

<400> 233
 gtgggnttga acccttttca nctccgcttg gtaccgagct aggtatccact agtaccggcc 60
 gccagtgtgc tggcattcgg cttagcgttg tgcgggcaga ggtccagaac ccggcccgca 120
 cctgccttga ccttcagatg tgcacactctg actggagag tggagagtac tggattgacc 180
 ccaaccaagg ctgcacctg gatgcacac aagtctcttg caacatggag actggttggg 240
 cctgcgtgta cccactcag ccagtggtg ccagaagaa ctggttcact agcaggaacc 300
 ccaaggacaa gaggcattgc tggttcggcg agagatctga cgtatgattc cagttcgagt 360
 atgggtggca gggtctcgac cctgcagatg tggacctgac cgggaggccg ctgca 415

<210> 234
 <211> 776
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(776)
 <223> n = A, T, C or G

<400> 234
 agcgtggtcg cggccgaggt ctgggatget cctggttctca cagttagata ttacaggatc 60
 acttaccggg aaacgggagg caatagccct ctccaggagt tcactgtgcc tgggagcaag 120
 ttatccagctt ccttcagctg ccttaccctt ggagttgatt ataccatcac tgtgtctgct 180
 gtaactggcc ctggngccag cccnccaagc agcaagccca ttccatttaa ttaccgaaca 240
 gaaattgaca aaccatccca gatgcaagt accgttgttc aggcacacag cattagtgtc 300
 aagtggctgc ctccaagttc cctgtttact ggttccagag taaccaccac tcccaaaaat 360
 ggaccaggat caaaggggac taaaactgca ggtccagatc aaacagaaal gactatctga 420
 gcttgcagca cccagttgca gtaagctgtt aagtgtctat gctcagatc caagcggaga 480
 gaagttcagcc tctggttcag actgcaagta accaacattg atcgctaac ggaatggcat 540
 tcaatgatgn ggatgcgat tcaatcaaaa ttgnttggga aaacccacag gggaagttt 600
 ncagtcnag gnggacctac tcaagccctg aggttgggac ccttgaatnt tctttnct 660
 gatggggaaa aaaaacctt nnaacttgaa ggacctgccc gggcggcctt ncaaaaccca 720

attccacccc cttggggggc gttctatgggg cccactcggg ccaaaccttg ggtaan 776

<210> 235
 <211> 805
 <212> DNA
 <213> Homo sapien
 <220>
 <221> misc_feature
 <222> (1)... (805)
 <223> n = A,T,C or G

<400> 235
 tccggcgggc gcccgggcag glecttgcag ctctgcagtg tcttcttcac catoaggtgc 60
 agggaatagc tcatggatto cactctcagg gctcagatag gtcacacctg acctggaaac 120
 ttgcccctgt gggctttccc aagcaatttt gctggaatcy gcatccacat cagtgatgc 180
 cagtccttta gggcgatcac lgtlgtttac tgcagtclyc accagagggt gctctctccc 240
 gcttggatto tgggcatcga cactanccac atactccact gtgggctgca ggccttcaat 300
 agtcatttct gtttgatctg gacctgcagt tllagttttt gttggtctct gtccattttt 360
 gggagtgggt gttactctgt aaccagtanc aggggaactt gacgggagcc acctgacact 420
 aatgctgctt lantgaaac lggcacttg cactctggga gcttctgcaa tttctgllcc 480
 gtaattaatg gaatttgcct tgcctgcttg ggggcllqtc tccacggcca glgacuncat 540
 acacagtgat ggtataatca actccaggtt taaagccgct atggtagcty aacttttgc 600
 ccaggcacia gtgaactcct gacagggclt tttcctnctg tctctcgtaa gtgatcctgt 660
 autatctcac lgggacccga ggggcatctt caaaccttcg ggcgggaccc cctaagccga 720
 attntgcaat atncatcaca ctggcggggc ctcgacactt cattaaaagg ccaatcccc 780
 cctataggga gtnctantaca atting 805

<210> 236
 <211> 262
 <212> DNA
 <213> Homo sapien

<400> 236
 tccggcgggc gcccgggcag gtcacllllt gtttttggct atgtctcgtt agtcaanagt 60
 aaaaactcag tttgagagat gcttgcagag gaaaaaata ltttccaaag tccatgtgaa 120
 attgtctccc atttttttgg cttttgaggg ggttcagttt gggttgcttg tctgtttccc 180
 ggttgggggg aaggttgggt ggttgggagc agccaggtt gggatgggg ggttttccag 240
 ggggagagcc agggcagct ctt 262

<210> 237
 <211> 372
 <212> DNA
 <213> Homo sapien

<400> 237
 agctgtgtct cggccagagt ccttaccaga ggtgccaccl acaacatcat agtggaggca 60
 ctgaaagacc agcagaggca taagggttcg gaaagaggtt ttacggtggg caactctgtc 120
 aacgaaggct tgaaccaaoc taaggatgac tccgtgcttg accctacac agtcttccal 180
 tatgcgcttg gagatgagtg ggaacgaaly tctgcatcag gctttaaccl gttgtgcacg 240
 tgcctaggct tgggagtggt tcatctcaga tctgattcat ctgaglygtt ccatgacaat 300
 ggtgtgaacl ucaagatttg agagaggttg gaccgtcagg ggggagatgt acctgcccgg 360
 ggggagctc ga 372

<210> 238

<211> 372
 <212> DNA
 <213> Homo sapien

<400> 238

tcgagcgggc	gcacgggcag	gtccattttt	ccctgacgg	ccccacttct	ctccaatctt	60
ghagtccaa	ccattgtcat	ggcaccctct	agatgaalca	catctgaast	gaccacttcc	120
aaagcctaag	cactggcaca	acagttttaa	gccttattca	gacatccgtt	cccactcctc	180
tcacacggca	taattgggaa	ctgtgtaggg	glcaaaagca	gagtcacccg	taggtltagt	240
caagccttcg	ttgacagagt	tgcctccggt	aacaaactct	tcccgaaact	tatgcctctg	300
ctggctcttc	agtgcctcca	ctatgatgtt	gtagtgtgca	cctctgggtg	ggacctcggc	360
cgcgaccacg	ct					372

<210> 239
 <211> 720
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1) ... (720)
 <223> n = A, T, C or G

<400> 239

tcgagcgggc	gcacgggcag	gtccaccata	agtcctgala	caaccaaggga	tgagctgtca	60
ggagcaagggt	tgatttcttt	cattggctccg	gtcttctctt	tgggggtcac	cgcactcga	120
tatccagtga	gctgaacatt	gggtgggtgc	caactgggcg	tcaggcttgt	gggtgtgacc	180
tgagtgaaat	tcaggtcagt	tgggtgcagg	ctagtggtta	ctgcagtcct	aaacagaggc	240
tgactctctc	cgcttgnatt	ctgagcatag	acactaacca	ctactccac	tgtgggtgc	300
aagccttcaa	tagtcatttc	tgtttgatct	ggacctgcag	cttttagctt	tgttggctct	360
ggctccatttt	tgggagtggt	ggttactctg	laccacgtaa	caggggaact	tgaaggcagc	420
caactlgaac	taaltgttgt	gtcctgcaaa	tgggtcactt	gcactcggga	tggtttgaca	480
atttctgttc	ggttaattat	ggaaatttgc	ttgctgtctg	cggggctgtc	tccacggcca	540
gtgacagcat	acacagngat	ggatnataca	actccnagtt	taaggcctct	atggttaact	600
taaaccttgtc	ccacagtcag	gaactlgaag	acaggggtatt	ctctctgtgt	ctccagagga	660
gancctggaa	tnntctcctt	ggancagaag	ganctctcaa	aacttggggc	ggaacccctt	720

<210> 240
 <211> 691
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1) ... (691)
 <223> n = A, T, C or G

<400> 240

agcgtggtcg	cggccagaggt	cctgtccagag	tggcactgggt	agaagttcca	ggaacccctga	60
actgtaagggt	ttcttcatca	gtgccacacg	gatgacatga	aatgatgtac	tcagaagtggt	120
cctggaatgg	ggcccatgag	atggttctct	gagagagagc	ctcttglact	aaallaggtc	180
ggtatlggtct	lqgcctatgc	cttalggggg	tggccttctg	gggcgggtgt	gtccgcttan	240
aaccatgttct	ctcaaagatc	atlltgttcc	caccacttgg	ctgctgacca	gaagtgcacg	300
gaagctgaaat	accatttcca	gtgtcctaac	caggytgggt	gacgaaaggg	gtcttttgaa	360
ctgtgggagg	aacatccaag	atctctgtgt	catgaagatt	gggtgtgtga	aggtttacca	420

```

gttgggggaa <logtctgtc tttttcttcc caatcagggg ctgcgkcttc tgal,kattot      480
tcaggggcaat gacataaatt gtatatctgg ttcccggttc cagggccagta atagttagcct      540
cttgtgacac caggcngggc ccanggaccc cttctctggg angagacccc gcttctcata      600
ctcgtatgat taacccggta atctctgcac tggcggctgn catgataccu ncaagggaatt      660
gggtgnggng gacctgccc gaggccctcn a                                     693

```

```

<210> 241
<211> 808
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> {1}... (808)
<223> n = A,T,C or G

```

```

<400> 241
agngtgggng cggcnggggt ctgggatgt cctgclytea cagttagata ttacaggatc      60
atttacggag aacacnggag anatagcct gtccnggggt tcaactgtgc tgggagcaag      120
ttacagcta ccatacggg ctttaaacct ggagttgatt ataccalnc tgtgtatgt      180
gtcaactggc gtggagacag ccccgcaag angaagccaa llttattta ttaaccgaca      240
gaaattgana aaccatccc galgcaggt accgatgtlc aggcacacag cattagkgtc      300
Aagtggctgc cttaagttc cctgttact ggttacagag taaccaccac kccccaaaat      360
ggaccaggac caacaaaaac taaaactgca ggtccagatc aaacagaaat gactattgaa      420
gggttgacgc ccacagtggg gtatgtgggt agtgtctatg ctcaagatcc aagcggagag      480
agtcagcttc tggkltcagac kgaagtaccc actatctctg ccccaactga cctgaagkltc      540
actcaggtca cccccacag cctgagccgc cagtgcacac caccacatgt kactcactg      600
gatctcagt gcgggtgacc cccaaggaga agaccggac ccatgaaga aatcaacott      660
gctcctgaca gctcctcgn ggglykatec ggaattatgg gggactgccc cggcngggcg      720
ntcgaaacgc aattntgaaa ttctcttccc actggngqgc gnttcagact tnettnkann      780
nggcacaatt cncctntagn gggctcgn                                     808

```

```

<210> 242
<211> 26
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> {1}... (26)
<223> n = A,T,C or G

```

```

<400> 242
agngtgggng cggcnggggt cnagga                                     26

```

```

<210> 243
<211> 697
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> {1}... (697)
<223> n = A,T,C or G

```


<400> 243

tcgagcgggc	gcccggggag	gtccaccgca	ccccattcc	tgctgggtac	atggcagccg	60
ccacgtgcc	ggattaccgg	ctacatcatc	aaglatgaga	agcctgggtc	tcctcccaga	120
gaagtgggtc	ctcgccccc	ccctgggtgc	acagaggcta	ctatlcctgg	cctgggaacg	180
ggaccgcaat	ataccattta	tgctattgcc	ctgaagaata	atcagaagag	cgggcccctg	240
attggaagg	aaaagacaga	cgaattccc	caactggtaa	ccctccaca	ccccaatctt	300
catggaccag	agatcttgg	tgctccctcc	acagtccaaa	agaccctctt	cgtcacccac	360
cctgggtatg	acactggaaa	tggtattcag	cttccctggc	ctctgggtca	gcaacccagt	420
gttggggcag	aaatgatctt	tgaggaaat	ggtttcaggc	ggaccacac	gcccacaacg	480
ggcaccnca	taaggatag	gccaagacca	taccccgccg	aatgtaggac	aagaagctct	540
ntctcaaca	ccatctcatg	ggcccattc	caggacactt	ctgagtacat	catttcctct	600
catcctggtg	ggcacttgat	gaanaacct	tacagtlcag	ggttccctga	actctacca	660
gnccacttc	tgacagganc	ttggcgnga	ccacct			697

<210> 244

<211> 373

<212> DNA

<213> Homo sapien

<400> 244

cgctgggtc	cgcccgaggt	ccattttctc	ctgacgggc	ccactctctc	ccaaLcttct	60
agttcacacc	attgtcatgg	cccatcttag	atqantcaca	tctgaaatga	cccttccaa	120
agcctaagca	ctggcacacc	agttcgaagc	ctgattcaga	callegttcc	cactcatctc	180
caacggcata	atgggaaacL	gtctgggggt	caagccagca	ghcatccgta	ggttgggtca	240
agccttctgt	gacaggttg	cccaaggtaa	caactcttcc	ccgancccta	tgccctctgt	300
ggtctttcag	tgccctcact	atgatgttgt	aggtggcacc	tctggtgagg	acctgcccgg	360
ggggcccgct	cga					373

<210> 245

<211> 307

<212> DNA

<213> Homo sapien

<400> 245

agcgtgggtc	cgcccgaggt	gtgccccaga	ccaggaahtc	ggttccgacg	ttggccctgt	60
ctgcttccct	taaacctcc	ccatcccaac	ctggtccctc	cccccccaac	caactttccc	120
ccccccccgg	aaacagacaa	gaaaaacaaa	ctgaaccccc	tcaaaaagcc	aaaaaatggg	180
agacatttcc	acatggactt	tggaaaatat	ttttttcccl	lccattccatc	tctcaaacct	240
agtttttata	tttgaccaac	cgaacatgac	caaaaaccaa	aagtgaacctg	cccgggcggc	300
cgtccga						307

<210> 246

<211> 372

<212> DNA

<213> Homo sapien

<400> 246

tcgagcgggc	gcccggggag	gtccaccaca	gaggtgcacc	ctacaacatc	atagtggagg	60
cactgaaaga	ccagcagagg	cataagggtc	gggaagaggt	tgttaccghg	ggcaactctg	120
tcaacgaagg	cttgaaccaa	ctacagggtg	actcgtgctt	tgaacccctac	acagtttccc	180
attatgcctc	tgagagtgag	tgaggacgaa	tgctcgaatc	aggctttaaa	ctgttgtgcc	240
agtgatttag	ctttggaagt	ggtcatttca	gatgtgatl	ctctagatgg	tgccatgaca	300
atggtgtgaa	ctacaagatt	ggagagaagt	gggacccgta	gggagaaazL	ggacctcggc	360
cggacaccag	ct					372

<210> 247
 <211> 348
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(348)
 <223> n = A,T,C or G

<400> 247
 tcgagcggcc gcccgggcag gtaccggggt ngtcagcgag gagccattca cactgaactt 60
 caccatcacc accctccggl atgaggagaa catgcagcac cctggctcca ggaagttcaa 120
 caccacggag agggctcttc agggcttget caggtccctg tccaagagca ccaagtgttg 180
 cccctctgtac tctggctgca gactgacttt gtcagacct gagaaacatg gggcagccac 240
 tggagtggac gccatctgca acctccgct tgatccacat ggttctggac tggacacana 300
 gcggctatac ttgggtactg anccnaacct ttggcgggga cncnctt 348

<210> 248
 <211> 304
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(304)
 <223> n = A,T,C or G

<400> 248
 gaggaactggc tcaagctccca gtatagccgc tctctgtcca gtccaggacc agtgggatca 60
 aggcgggagg tgcagatgac gtccactcca gtggctgccc catgtttctc aagtctgagc 120
 aaagncagtc tgcagccaga gtacagaggg ccaacactgg tgcctctgca cagggagctg 180
 agcagggcct gaaggacct ctccgtggtg ttgaaettcc tggagccagg gtgctgcag 240
 ttctctcat accgcaagggt gllgatgctg aagttcagtg tgaatggctc ctccgtgacc 300
 accc 304

<210> 249
 <211> 400
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(400)
 <223> n = A,T,C or G

<400> 249
 agcgtggctg cggccgaggt ccaccacacc caattacttg ctggtatcat ggcagccgcc 60
 acgtgccagg attaccggt acatcatcaa gtatgaaag cctgggtctc ctcccagaga 120
 agtggctcct cggcccgacc ctgggtgcaa agaggtact attactggcc tggaaaccgg 180
 aaccgcatat acaatttctg tcaatgacct gaagaataat cagaagagcg agcccttget 240
 tggaaaggaa aagacagacg agcttcccca actggttaac ctccacacc caattctca 300
 tggaccanac ancttggatn gtcctttcac nggttnaaa aaccttctc gcccccac 360
 ctggtgggatt aaccttggga aagggggatt tnaacttcc 400

<210> 250
 <211> 400
 <212> DNA
 <213> Homo sapien
 <220>
 <221> misc_feature
 <222> (1)...(400)
 <223> n = A,T,C or G

<400> 250
 tcgagcggcc gcccgggcag gkctgtcng agtggcctg gtagaagllc caggaacctt 60
 gaactgtatg ggttcttcat cagtgcacac aggatgacat gaahgatgt actcagaggt 120
 gtcttggaat ggggcccatt agatggttg ctgagagaga gttcttctg ctacattcgg 180
 cgggtatggt cttagcctat gctttatgg ggtggccctt gtggcggtg tggtcggct 240
 aaanccatgt tctcacaaga tcatctgttg cccacactg ggttgctgac cagaagtgc 300
 aggaagctga ataccatttc cagtgtcata ccccgggngg gtgacnaag ggggtcttt 360
 ngacctggng aaaggaacca tccaaaacct ctgncccatg 400

<210> 251
 <211> 514
 <212> DNA
 <213> Homo sapien
 <220>
 <221> misc_feature
 <222> (1)...(514)
 <223> n = A,T,C or G

<400> 251
 agcgtggncg cggccgaggt ctgaggatgt aaactcttcc caggqgaagg ctgaagtgt 60
 gacctgggtg ctactgggtc ctctgagtc agakctgtga ctgatngaa ctgaagtagg 120
 tactylagat ggtgaagttt gggtaglccc aatgctgca tctccagagc ctccatctt 180
 taccgtttct tcttttctta tgggatgaga cactgttyag tttctctaa agtcaccact 240
 gaattcttcc tccaaaggaa aacctgtgga aaagccctct attctgccc cataatttgg 300
 ttctcttaak cttctctgaa tcaactallc cctggaangt ttgggaanaa nngggonacc 360
 tgncaatgga aattggatan aaagtccca ccatcttacc cancnagcag aaagtggga 420
 nggtacogaa aagctccaag taanaaaaag gaggcgagta aaggtcaagt gggcaccagt 480
 ttcaacaaaa actttcccca aactatanaa ccca 514

<210> 252
 <211> 501
 <212> DNA
 <213> Homo sapien
 <220>
 <221> misc_feature
 <222> (1)...(501)
 <223> n = A,T,C or G

<400> 252
 aagcggccgc cgggcagcn ncagagtgcc cttagggact gggntcacc cagggtctgc 60
 ggcagtgtgc acagcgccag ccccgctggc ctccaaagca tgtgcaggag caaakggcac 120
 cgagatatte ctcttgccac tgttctctta cgtggtatgt ctcccatca tcttaaccag 180
 ctgctctatg aggttcacac ttgaattct cttttcgtt cccagacal gtgcagctca 240

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tttgggtggc tcttatgttt ggggaaagtt tcttgaaact gtgccaactga cctttacttc 300
ctctctctct notggagett tccgtacctt ccactctctgc tgnitggnaa aagggnngaa 360
ctctttatca atttcatttg acagtandcc nctttctncc caaaaatnc aagggaasat 420
attgattncc aagagggatt aaggaaacac ccaattatg ggggccaaga ataaaagggg 480
ctttccaca ggttttttc k 501

```

<210> 253

<211> 226

<212> DNA

<213> Homo sapien

<400> 253

```

tcgagcggcc gcccgagcgt gtctgcaggg tattctangt gttctgagca catatgagat 60
aacctggggc aagctatgat gttagatacg tttaggtgat taatlgcct tttgaactgcc 120
atctcagcgg atgacagcct tctcactgac agcagagatc ttcctcactg tgccagtggg 180
caggagaaag aguatgctgc gactggacct cggccgggac cagct 226

```

<210> 254

<211> 226

<212> DNA

<213> Homo sapien

<400> 254

```

agcgtggctg cggccgaggt ccagtcgcag catgctcttt ctctgcccac ctggcacagt 60
gaggaaagtc tctgctgtca gtgagaagge tctcatccac tgagatggca gtcaaaagtg 120
catttaatcc acctaacgta tcgaacalca tagcttgccc caggttatct catatgtgct 180
cagaacaact acaatngcct gcagaacctg cgggcccggc gctega 226

```

<210> 255

<211> 427

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (11... (427)

<223> n = A, T, C or G

<400> 255

```

cgagggggcc gccgggggag tccgaactcc aatccagaga accaaagggc cagatgtcag 60
aagctacacc atcacaggtt tacaaccagg cactgactac aagatctacc tgtacacct 120
gaatgacaat gctcggagct cccctgtggt cctcggccgc tccactgcca ttgatgcacc 180
atccaacctg cgtttcctgg ccaccacacc caattccttg ctggatatcat gccagccgcc 240
acgtgccagg attacgggcl acataalcaa gtatgagaag cctgggtctc ctcccagaga 300
agtggtccct cggcccccgc ctggtggnac agaagctact attactgccc tggaaagggg 360
aacccaatat acaatttatg tcattgcoct gaagaataal ccaaaagacc agccctgat 420
tggaggg 427

```

<210> 256

<211> 535

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (535)

<223> n = A, T, C or G

<400> 256

agcgtgggtcg	cgcccgaggk	actgtcagag	lqgcactggg	agaaqgttoca	ggaaacctga	60
actgtcaggg	ttcttcatca	gtgccaaacag	gacgacatga	aatgatgtac	tcagaagtgt	120
cctggaaatgg	ggcccatgag	atggkttgtct	gagagagagc	ttcttgtact	gtctttttcc	180
ttccaatcag	gggtctcgtc	ttctgattat	tcctcagggc	aatgacataa	attgtatat	240
cggttcccg	ttccaggcca	gtaatatgtag	cctctgtgac	acagaggcgg	ggccgaggga	300
ccacttctct	gggaggagac	ccaggcttct	catacttcat	gatgtanccg	gtaactctgg	360
caccgtggcg	gctgccaatga	tauccagcaag	gaattgggtg	tggtggccaa	gaaccgcag	420
ttggatgggt	catcaatggc	agtggaggcg	tcgatnacca	caaggagagc	ccgancattg	480
tcattcaagg	tggacaggta	gaatcttcta	atcaggtgac	tggtttgtaa	acctg	535

<210> 257

<211> 544

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (544)

<223> n = A, T, C or G

<400> 257

tcgagcggcc	gcccgggag	gtttcgtgac	cgtgacactc	aggtggacac	cacctccag	60
agcctgagcc	agcagatcga	gaacatccgg	gcccagagg	gcagccgcaa	gaacccccc	120
cgcacctgcc	gtgacctcaa	gatgtgccac	tcctactgga	agagtcagga	gtactggatt	180
gaccccaacc	auggtcgcaa	cctggatgcc	atcaaaqlct	tcctcaacat	ggagactggg	240
gagacctgcg	tgtaccccaa	tcagcccagt	gtggcccaga	agaactggta	catcagcag	300
aaaccccaagg	acaagaagca	tgtctgggtc	ggcgaaagca	tgaccgagcg	attccagtto	360
gagtcagggc	gcccaggcgc	ggcccttccc	gatgtggacc	tcggcccgca	ccacgctaag	420
cccgaaattcc	agcacaactg	cggccgttac	tagtgggata	cgagcttcgg	taccaagctt	480
ggcgtaaatca	tgggncatag	ctgtttctct	agtgaaaatg	gtatttcgct	tcaccaatttc	540
ccac						544

<210> 258

<211> 418

<212> DNA

<213> Homo sapien

<400> 258

agcgtgggtcg	cgcccgaggk	ccacatccgg	aggttcggag	ccctgggccc	catactcgaa	60
ctggaaatcca	tcggtcattgc	ttctcccgaa	ccagacatgc	ctcttctcct	tggggttctt	120
gctcatgtac	cagttcttct	ggcccaact	gggttgagtg	gggtacacgc	aggtctcacc	180
agtctccatg	ttgcagaaga	ctttgatggc	atccaggttg	cagccttggg	tggggtccat	240
ccagtactct	ccactcttcc	agtcagagtg	gcacatcttg	aggtcacggc	aggtccgggc	300
ggggttcttg	cggctggcct	ctgggctcgc	gatgttctcg	atctgcttgc	tcnagctctt	360
gaagggttgg	gtccacatcg	aggtcacggg	cacgaacact	gcccggggcg	ccgtctga	418

<210> 259

<211> 377

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> {1}...{377}

<223> n = A,T,C or G

<400> 259

agcgtggtcg	gggcggaggt	caagaacccc	gcccgcacct	gcccgtgacct	caagatgtgc	60
cactctgact	ggaagagtgg	agagtacttg	altgacccc	accaaggttg	caacctggat	120
gccatcaaa	tcttctgcaa	catggagact	ggtgagacct	gcglgtaccc	cactcagccc	180
agtgtggccc	agaaagaactg	gtatctcaga	aagaaccccc	aggacaagag	gualgtcttg	240
ttcggcgaga	gcataaccca	tggattccag	ttcgagtatg	gcgcccaagg	ctccgacctt	300
gcccgtgttg	acctgcccgn	gcccgnccgc	tcgaaagacc	caattctccc	gncacacttg	360
gcccgtggtt	actactg					377

<210> 260

<211> 332

<212> DNA

<213> Homo sapien

<400> 260

tggagggggc	gcccggggag	gtccacatcg	gcagggtcgg	agccctggcc	gccatnctcg	60
aactggaatc	catcggtcat	gtctctcgcc	aaccagacac	gcctcttctg	cttgggggtc	120
ttgctgatgt	accagttctt	ctggggccaa	ctgggtctgag	tggggtacac	gcagggtctc	180
ccagtctccc	tcttgcagaa	gactttgatg	gcctccaggt	tgcagccttg	gltgggggtc	240
atccagtact	ctccactctt	ccagtcagag	tggcacatct	tgaggtcccg	gcagggtcgg	300
gaggggtttt	tgaactcggc	cgcgaccacg	ct			332

<210> 261

<211> 94

<212> DNA

<213> Homo sapien

<400> 261

cgagcggcgg	cccggggcgg	ttccccccct	tttttttttt	tttttttttt	tttttttttt	60
tttttttttt	tttttttttt	tttttttttt	tttt			94

<210> 262

<211> 650

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> {1}...{650}

<223> n = A,T,C or G

<400> 262

agcgtggtcg	gggcggaggt	ctggcattcc	ttcgacttct	ctccggccga	gcttcccaga	60
acatcacata	tcactgcasa	aatagcattg	catacatggg	tcaggccagt	ggaaatgtaa	120
agaaagggct	gaggtctgat	gggtcaaatg	aangtgaatt	caaggctgaa	ggaaatagca	180
aattcaccta	ccagttcttg	gaggaaggtt	gcacgaaaca	cactggggga	tgggcgaaa	240
cagtctttga	atatcgaaac	ggcgaaggtg	tgagactacc	tattgtagat	attgcacctt	300
atgacattgg	tgttcctgat	caaggaattg	gtgtggacct	tggcctgtgt	tgttttttat	360
aaaccaaact	ctatctgaaa	tcccaacaaa	aaattttaa	ctccatatgt	gntcctcttg	420
ttctaatctt	gggaaccagt	gcaagtgaac	gacaaatctc	caattattta	tttccaaat	480

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gttttgaaac agtataattt gacaaagaaa aaaggatact tctctttttt tggctgggtcc 540
accaaataca attcaaaagg ctttttgggt ttattttttt anccaattcc aatttcaaaa 600
tgtctcaatg gngcttataa taaataaac ttccacctt ntttttngat 650

```

<210> 263

<211> 573

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(573)

<223> n - A, T, C or G

<400> 263

```

agcgtgggtcg cggccgaggt ctgggatgck cntgctgtca cagtgggata ttacaggatc 60
acttacggag aaccaggagg aatagacct gtccaggagt tcaactgtgc tgggagcaag 120
tctacgctc cctcagccg ctttaaacct ggagttgalt ctaccatcac tgtgtatgct 180
gtcactggcc gtggagacag ccccgcaagc agcaagccaa ttccattaa ttacggagca 240
gaaattgaca aaccatccca gatgcaaglg accgatgttc aggacacacg cattagtgtc 300
aagtggctgc ctccaattc cctgttaact ggttacagaa gtaaccacca ctcccaaaaa 360
tggaccagga ccaacaaaaa ctaaaactgc aggtccngat caaacagaaa atggactatt 420
gaaagcttgc agccacaggt ygaaglatgt gntagnggt ctatgctcag aatcccaagc 480
cggagaaagt cagccttctg gttaagactg cagtaaccaa cattgatcgc cctaaaggac 540
tggncattca cttggatggt ggatgtccaa ttc 573

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<210> 264

<211> 550

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(550)

<223> n - A, T, C or G

<400> 264

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tcagagggcc gcccgggccg ntcccttgcc ctctgcagng tttctcttcc catcagggtg 60
agggaatagc tcatggattc catcctcagg gctcgaatcg ntcacctgt acctggaac 120
ttgccctgt gggtttccc aagcaatttt gahghantcg acatccacat cagngaagtc 180
cagtccttta gggcgatcaa tgttggttac tgcagttctg accagagget gactctctcc 240
gtthggaltc tgaagcatag cackaaccaa atactccact gtgggntgca agcttccat 300
agtcatttct gttagatctg gacctgcagt tttaagtttt tgggtggtct gttccatttt 360
tgggaagtgg ggggttactc tgtaaccaag aacgggggaa cttgaaggca gccacttgac 420
actaatgctg ttgtctcgaa catcggkcaa ttgcattctg ggatggtttt gacaatttct 480
gattcggcaa attaatgaa attggtttgc tgtttggcgg ggtctnctcc accggccagc 540
gacagcatac 550

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<210> 265

<211> 596

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (596)

<223> n = A, T, C or G

<400> 265

tcgagcgccg	gcccgggcag	gl.cattgcag	ctctgcagtg	ttttcttcac	catcaggtgc	60
agggaatagc	tcacggattn	catcctcagg	ntccagtag	gtcaccctgt	ccctggaaac	120
ctgccctgt	gggtttcc	aagcaattt	gatggacccg	acatccacat	cagtgaalgc	180
cagtccttta	ggcgatcaa	tgkknrtac	tgcagtctga	accagaggt	gaatctctcc	240
gcttggtatc	tgagcaakga	actaacccac	atctccact	gl.gggtgca	agccttcaat	300
actcctttct	gtttgctctg	gacctgcagt	cttaagttti	tgctggcct	gncctatttt	360
tggggaagg	gtggttactc	ttgtaaccag	taacaggcga	acttgaagca	gccacttgac	420
actaatgtg	gtggcctgaa	calcggtcac	ttgcctctgg	gatggattgg	tcattttclg	480
ctcggtatth	acttgggact	tggttactg	gcttgcgggg	gctgtctcca	cggttactga	540
caagcataca	cagngatgg	gtataatcaa	ctccaggtti	aggccctctg	atggtt	596

<210> 266

<211> 506

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (506)

<223> n = A, T, C or G

<400> 266

agcgtgtctg	cggccgaggt	ctgggatgct	ctgtgtgtca	caatgagata	ttacaggatc	60
acttcttggg	aaacgggggg	aaatagccct	gtccaggggt	tcactgtgct	gggggggggg	120
tctacagcta	cctccagcgg	ccttaaacct	gggtttgatt	atactctctc	tgcttatgct	180
gtcactggcc	ctggagacag	cccgcaagc	agtaagccaa	tttccattca	ttaccgaaca	240
gaaattgaca	aaccatcccc	galkgcaagt	accgalttct	aggacaacag	catctgtgtc	300
aatgtggtgc	cttcaggttc	ccctgttact	ggtlccagag	taaccaacca	tcccaaaact	360
gggaccagga	cccaaaaaaa	actaaaaact	caatgtccag	alcttccagc	aatgactatt	420
gaaggcttgc	agccacacgt	ggagtatgtg	gnttagtctc	lcttctcaga	atnccaagcg	480
gagagagta	gcctctgggt	cagact				506

<210> 267

<211> 548

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (548)

<223> n = A, T, C or G

<400> 267

tcgagcgccg	gcccgggcag	gl.tacggctc	tcaggacgtc	accaccalgg	actgggtctc	60
gtctctctclg	acctctctca	ctcagggcac	aggttctctg	gcccctctct	ccctgactca	120
ncctccctcc	ggctccgggt	ctctgggac	gtcagtcacc	atctctctga	ctggacccag	180
cagtgaaggt	ggtgcttctg	acttctctct	ctggtaacca	caacacctcc	gcccggcccc	240
caaacctcalg	attctcttgg	tcactaagcg	gccttcaggg	gl.cctctgct	gcttctctctg	300
ctccctctct	ggaacacgg	cctccctgac	cttctctctg	ctccctctctg	aggatgagcc	360
lgtattattac	tggaagctca	tatgcaggca	acaacaattg	gttctctctg	ggaagggaac	420
agctgacccg	tnctaaaggc	aagcccaagg	cttgcctccc	tcggtcactc	cttccctccc	480

ctcctctgaa gaagcttllca agccaacaa gncacactgg gtgtytctca taagtggact 540
ttctaccc 548

<210> 268
<211> 584
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(584)
<223> n = A,T,C or G

<400> 268
agcgtggtcg cggccgaggt ctgtagcllc tgtgggaatt ccactgctca ggcgtaaggc 60
tcaggtagct gctggccggc tacllqttgt tgccltqntt ggagggtgtg gtgghctcca 120
ctccggccll: gacgggynhg ctctctgccc tccaggccac lqtcacggct cccgggtaga 180
agtcatttat gacacacccc agtgtggccc lqttggettq vactctctca gaggagggtg 240
ggacacagagt gaccgagggg gcagcccllgg gctgacclag gaaggtcagg ttggtccctc 300
cgccgaacac ccaattgttg llgunkgcac atgagctgca gtaataatca gctccalml 360
cagccctggg gacgggqgcn qtcaggggag gcccgtgttt gncaggncct ggagggcagg 420
naagcgatca gggacccctg agggccgcll: taaggaccl: vanaaatcat gactttgggg 480
ggcctttgce tgggngtttg llgntnacca gnaaaacaaa atttcatlmo gcaccaacgt 540
caclqntggt tccagtgca nqaanatggt gaactgaant glnc: 584

<210> 268
<211> 368
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(368)
<223> n = A,T,C or G

<400> 268
agcgtggtcg cggccgaggt ctgtagcllc tgtgggaatt ccactgctca ggcgtaaggc 60
cttclcllll: ghggcctgaa ccagtgtcat caaktgagag tagcaggaat gcoqtctcca 120
ctgctqtrtt atnagtctgc agcttcacag cccatggctc ccaatgtccc agttctctca 180
tgtccaccaa agtaccctgc tcaccattla caccocaggl cccacagttc tcttggglgt 240
gcttggcccg aaggggagga agtanacaga tgggtgclgt ccacacagttc lqnatcaggg 300
tacgaggaat gacclclagg gctcaggona caagccctgt atggacntgc ccgggggggc 360
ccgclcga 368

<210> 270
<211> 368
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(368)
<223> n = A,T,C or G

<400> 270

tcgagcgggc	gcccgggcag	gtccatacag	ngctgllkcc	caggccctag	aggnccctcc	60
ttgtaccctg	alcccgaact	gtgggcccag	caccatccgt	ctacttacct	cccttcgggc	120
caagcaccac	caggagaact	glhagacctg	gggtgtaaat	ggngagacgg	gtactttggt	180
ggacatgaag	gaactgggca	tacgggagcc	attggclgng	aagctgcana	cttataagac	240
agcagtggag	acggcagttc	tgtacttgcg	aattgtatga	atcglttccn	gcacaaaaaa	300
gaagggggat	gacccnagcc	ggcaagggcg	ggcttccctg	tgcctgacct	cggccgctga	360
ccacgctt						368

<210> 271
 <211> 424
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> [1]... (424)
 <223> n = A,T,C or G

agcgtggtcg	cggccgaggt	ccactagagg	tctctgtgac	attgcccaag	cagngtctct	60
gggtllcccc	ctcctagggg	ggcttgcctg	ggggaggggc	tgcctatggt	tgtgcgggtt	120
cctcctggag	agtggggcca	aaggtctgcg	ggttgtggln	tctgggaac	tccgagggcc	180
gagggtctaa	tccatgaagt	llgllggttg	ctggttgcac	cacagcggag	ccccgtttaa	240
ctactacgll	gcactgtctn	tgggcccagc	glhctccana	caggglytgc	tgggcaccaa	300
ggtgaagatc	atgctgcctt	gggacccanc	tggcaaaaat	ggccctttaa	aaccctttgc	360
ontgaccacg	tgaaccattt	gtgnggagcc	caagatggan	atacttgcct	accanccccg	420
attc						424

<210> 272
 <211> 541
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> [1]... (541)
 <223> n = A,T,C or G

tcagagcgggc	gcccgggcag	gtctgccaaq	hagaccctgt	tacgtctctg	ggactggctg	60
gggcacggca	ggcggtcttg	gcctccccc	cttctgltck	gagatggggg	tggtagggcg	120
tatctcatct	ttgggllhna	ccatgctcac	gtggkccagg	aggggcttct	langucccaat	180
cttaccaglt	nggtcccagg	gcagcatgat	cttccacttg	atgcacagca	caccctgtct	240
gagcaccacn	tgggcacacg	cagtgtcaac	gtagtgttta	acnqgtctct	cgtgtgggat	300
cacacggcca	tccacaaact	tcatggattt	agccctctgl	cctcggagtt	tcccaaaaca	360
ccacaacctc	gccagcclll	gggcccact	tcttcckqna	tgaacccgca	gnaaccctt	420
anccaggccc	llccnccan	gnangccctt	ccnaggaggt	tttgtaaan	ccunnaactc	480
ltgctctggg	caaattggga	cacagacctn	kuntnggacc	ttggnccccg	aaccacccgt	540
t						541

<210> 273
 <211> 579
 <212> DNA
 <213> Homo sapien

<220>

<221> misc_feature

<222> (1)... (579)

<223> n = A, T, C or G

<400> 273

agcgttggtg	cgcccgagg	ctggccctcc	lggcaaggct	ggtgaggatg	gtcaccctgg	60
aaaaccogg	cgacctgg	agagaggag	lgttggaaca	caagggtgctc	gtgggtlctac	120
tggaaactct	ggacttctctg	gcttcxaagg	catttagggga	cacaatggtc	tgatggatt	180
gaagggaacg	cccgggtgctc	ctgtgtgtgaa	gggtgaaact	ggngccctctg	gtgaaactgg	240
aactccaggt	caaacaggag	cccgngggt	lactggngag	agaygacgtg	ttggtgccc	300
tgggcaaac	ctgcccgggc	ggccggctcna	aaagccgaaa	lccagnacac	tgccggccga	360
tactantgga	ntccgaactt	cggtaccaaa	gcttggcgt	aactatggcc	atgcttgtt	420
ccctggggng	gaatttgta	ttccgttcc	gattccacac	aaataccga	accgggaag	480
catttaactg	taaaagcct	ggggggggt	aaatgagtg	agcctaactc	ncalcttaact	540
ggcgttgccc	ttcaactccc	cgtttttcca	gtccgggna			579

<210> 274

<211> 330

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)... (330)

<223> n = A, T, C or G

<400> 274

tcgagcggcc	gcccgggcag	gtctgggcca	ggggcaacaa	cacgtccctc	ctcaccagga	60
agcncacggg	ctcctgtttg	acctggagtt	ccattlctac	caggggcaac	aggttcaccc	120
ttcagaccag	gagcaccggg	ctgtcccttc	aalccctcca	gaccattgtg	ncacctaatg	180
cctttgaagc	cagggagctc	aggagttcca	ttgaaaaccac	gagcaccctg	tggtcnaaac	240
actcctctct	caccaggtcg	tcagggtttt	ccaggggtgac	catctctaac	agccttccc	300
ggagggccag	acctcggcgc	cgnccacgct				330

<210> 275

<211> 97

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)... (97)

<223> n = A, T, C or G

<400> 275

ancgtgtgtcg	cgcccgagg	cctcaccag	ggtgncacct	acacactcct	ggtggagcca	60
ctgaagagac	ancagagcca	caagggttcgg	gaagagg			97

<210> 276

<211> 610

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature
 <222> (1) ... (610)
 <223> n = A, T, C or G

<400> 276
 tegagcgggc gcccgggcag gtccatttcc tccclgacgg tcccacttct ctcccatctt 60
 gtagttcaca ccattgtcat ggcaccatct agatgataca catctgaaal quccacttcc 120
 aaagctlaag caactggcaca acaglllluu gcoctgattca gacatctcgtt cccactcacc 180
 tccaacggca taatgggaaa ctgtgtaggg gtcaaaagac gaggcatccg taggllggtt 240
 caagccttcg ttgacagagt tgtccacggc aacacacctct tcccgaaact latgcctctg 300
 ctggtctctc agtgnatcca ctatgatgll gtaggtagca cctclggtag ggaactcngn 360
 ccngaacaa cgttngccc qnattctqca gaataatccc alccacacttg ggggcctctt 420
 cgaacatgca tcntaaaagg ggcaccaatt tcccccclat agnggaancc gtatllmacc 480
 atttccactq nccngccgnt tttaaaaaag ncggtgaact ggggaaaaaa cctggcggtt 540
 acccaacttt aatgcgcctt ggcgcacaaa tcccccttt kngkccancc tgggcgtaaa 600
 laaacgaaaa 610

<210> 277
 <211> 38
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1) ... (38)
 <223> n = A, T, C or G

<400> 277
 ancgnggtcg cggccgaggt nttttttctt nttttttt 38

<210> 278
 <211> 443
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1) ... (443)
 <223> n = A, T, C or G

<400> 278
 agcgtgctcc cggccaggt ctgaggtac atgctctggt gtggacgtga gccacgaaga 60
 ccctgaggtc aagttcaact qylacqlyga ccgogtggag gtgcataatg ccaagacaaa 120
 gccgcgggag gaggagtaca nccgcacgta ccggngggtc agcgtcccca ccgtccctga 180
 ccagaaattgg ttgaatggca aggagtacaa gngcaaggll kcpwncnnaq ccntccaggt 240
 cccctctgga aaaaaaatct ccaagcccaa agggcagccc cagagaaccac aggtgtacac 300
 cctgcccana tccggggggg aaaaagacaa naacccnggt cagccttaac ttgcttggtc 360
 naangctttt tatcccaact nactctccc ntggcaantg gaaaaaccaa kyygccaaac 420
 cgaasaacaa ttacaanaac ccc 443

<210> 279
 <211> 348
 <212> DNA
 <213> Homo sapien

<220>

<221> misc_feature

<222> (1)... (348)

<223> n = A,T,C or G

<400> 279

tcagacgggc	gcccgggcag	gtglaaggagt	ccaqcaacggg	ayncgtggtc	ttglaqgtgt	60
tctcgggtg	cccattgctc	lncacatcca	cggcgatgfc	netgggatag	aaqcccttga	120
ccaggaagg	caggatgccc	tggttcttgg	tcattctctc	cgggatagg	ggcaggggtg	180
acacctggg	ttctcggggc	ttgccclbtg	gtttlqnana	tggttttctc	gatgggggct	240
ggaagggtt	tgttgnaaac	nlkccacttg	ackccctgce	atracccag	ncctggngca	300
ggacggggg	gacnctnacc	ncacgggaac	ggcttgglng	actgtccc		348

<210> 280

<211> 149

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)... (149)

<223> n = A,T,C or G

<400> 280

agcgtggctg	cggacgaggt	cctgtcagag	tggnaactgg	aynaagttcca	ngaaccctga	60
actgtaagg	ttcttcacca	gtgcnaacng	gatgacntga	aatgatgtac	lncaggaagng	120
cctggaatgg	ggcncalga	atggttgc				149

<210> 281

<211> 404

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)... (404)

<223> n = A,T,C or G

<400> 281

lncagcaqnc	gcccgggcag	gtccaccaca	lnccaattcc	lacttggtatc	atggcagccg	60
ccnagtgcac	ggattaccgg	ctacatcnic	aagtatgaga	agccctgggtc	tctcccaga	120
gaagtggctc	ctcggccccc	cccttqgtgc	acagaggtca	ctattactgy	actgganccg	180
ggaaccgaat	atccacattc	tgtcattgcc	clnaagaata	atcayagag	cgagccctga	240
atctggagga	aaaagacaga	cgaacttccc	caactggtaa	cccttcacca	ccccatctt	300
catggaccag	agatcttggg	tgtlccctcc	acagtlcann	agaccccttc	ggcanncccc	360
cctgggtatg	aaactgggga	anngqanatt	aanchttct	ggca		404

<210> 282

<211> 507

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)... (507)

<223> n = A, T, C or G

<400> 282

agcgttggtcg	cgcccgagggt	ccggcgtgct	ccctgctgtca	cgttgagata	lccaggatc	60
acttacggag	aaacagggag	aantagccct	gtccaggagt	tcactgtgcc	tgggagcaay	120
tctacagela	ccatcagogg	ccataaaccl	ggagtfgatt	ataccalnac	cgtgtal.gct	180
gkcccgggcc	gtggagacag	ccccgcagc	agcaagccaa	tttccattna	ttaccgaaca	240
gaaattgaca	aaccatccca	gctgcaagt	acaggtgttc	aggaacaacag	cattagtgtc	300
aagtggctyn	cttcaaggtn	ccctggtacl	gggttacaga	ntaaccacna	ctcccaayna	360
tggaccagga	accacaaaaa	cttcaactgc	agggctccaga	tcaayacaga	aatgactatt	420
gaangcttgn	agccacacgt	gggagtatgn	gggtagtgnc	latgottcag	actccaagcg	480
qaaaaangtc	aagccttntg	ggttcaa				507

<210> 283

<211> 325

<212> DNA

<213> Homo sapien

<220>

<221> misc feature

<222> (1)...(325)

<223> n = A, T, C or G

<400> 283

tccagcggcc	gcccgggag	gtccctgcag	ccctgcagtg	tcclcttenc	caccaggcgn	60
agggaaatgc	tcattggattc	cctccctcag	gctccagtag	gtcaccctgt	acctggcay	120
ttgcccttgc	gggcltccna	agggcatttt	gatggaacln	acatccacat	cagtgaatgc	180
cagkccctta	gggcgatena	tcttggttac	tgcaynetga	accagaggcl	gactctctcc	240
qcttgacttc	tgagcataga	cactaaccac	alautccact	gtgggctgca	anccttcaat	300
aannccattc	tgtttgatct	ggacc				325

<210> 284

<211> 331

<212> DNA

<213> Homo sapien

<220>

<221> misc feature

<222> (1)...(331)

<223> n = A, T, C or G

<400> 284

tccagcggcc	gcccgggag	gtccggtggg	gtccctggcac	acggccatgg	gggngttgnt	60
ctnatccagc	tgcctccgna	ccatlggna	gtttgagaa	gtgtgcagca	atgacacana	120
nacccttcag	lcttccctgc	acttctttgc	cacaaagcln	acctggaggg	qacccaagaa	180
gggcacayay	ctccacctgg	actacntcgg	gcctlgcnaa	tacatccncc	cttgcctgga	240
clctgagctg	acggaaattcc	ccctagcgca	tggggagactg	gcctcaagaa	cgtccctggca	300
ccttctgtatg	anagggatga	agacacnaac				331

<210> 285

<211> 509

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature
 <222> (1)...(509)
 <223> n = A,T,C or G

<400> 285

agcgtggtcg	cgcccgaggt	ctgkctaca	gtctctagga	ctctactccc	lcagcagcgt	60
ggtgacccgtg	ccctccagca	acttcggcac	ccagccctac	acctgcann	tgatcacaa	120
gcacacacac	acccaggtcg	acaagagagt	lqagcccaaa	tcctgkqaa	aaactccac	180
atgcccaacc	tgcccagcac	ctgaactctt	ggggggaccc	lcagtcttcc	tcctccccc	240
caccccccctt	ccaaaccctgc	cggggggggcc	gtctgaaagc	cgaattccag	ccacctggcg	300
gcccgtacta	gtggnccna	acttggnanc	caacctggng	gsantaabng	gcataacctg	360
tttctggggg	gaaattggtg	tcngtlllnc	aattccnca	caactacga	gcgggagca	420
taaaagngta	aaagcclygg	qngggootan	tgaaglyqng	ctaaactcac	cttattngc	480
gttgcgcctc	actggccgc	ttttccagc				509

<210> 286
 <211> 336
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(336)
 <223> n = A,T,C or G

<400> 286

tcgagcggcc	gcccgggcag	gtttggaagg	gggclgnggg	qqaqagqaa	gaotgacggt	60
ccccccaggga	gttcagggtgc	cgggcacgggt	gggccttngt	gagttttgtc	acaagatttg	120
ggclcaaccc	ctttgtccac	cttggtgttc	clggactttg	gatctacgtt	gcaggtgcag	180
gtctqngngc	cysaagltgct	ggaggggann	gtcaccacgc	cgctgagggg	gtagagtccr	240
gaggaactga	ngacagacct	ggggcngnac	cacgctaagc	cgaattctlgc	nyalalccar	300
cacactggcg	gcgctccga	gaatgcactt	tagagg			336

<210> 287
 <211> 30
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(30)
 <223> n = A,T,C or G

<400> 287

agcgtggtcg	cgcccgagga	ctgkctaca		30
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<210> 288
 <211> 316
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(316)
 <223> n = A,T,C or G

<400> 288

tccgaggggccc	gcccggggcag	gcccacacatcg	gcagggttcgg	agccctgggccc	gcataactcg	60
aactggggttc	caccgggtcat	gctcttgccg	aaccagacat	gcclcttgctc	cttgggggttc	120
ttgctgatgn	accagtttctt	ctggggccacc	ctgggctgag	tgggggtacac	gcagglctcc	180
ccagttctcca	tgttgacagaa	gactttgatg	gcattccaggt	tgcagctcttg	gttgggggtca	240
atccagtact	ctccactctt	ccagtcagag	gcccacatct	tgggttcccg	gcagggtgcgg	300
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<210> 289

<211> 308

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)... (308)

<223> n = A, T, C or G

<400> 289

agcctgtgctg	ggcccgagggt	ccagccctggg	gataanggtg	aaggctggctg	ccctggggtct	60
ccaggtatac	ctggggtctg	tggtggccct	ggtgagagag	gaggaatctg	cccccagga	120
cctgctggtt	tccttggtgc	tcctggacag	aatggctgaa	ctggnggtan	aggagaaaga	180
gggggtccgg	ntganaaagg	tgaaggaggc	ctctctgcat	tggcaggggc	cccangactt	240
aggggtggag	ctggccccc	tgcccccga	ggaggaaagg	gtgctgctgg	tcctctctgg	300
ccacttg						308

<210> 290

<211> 324

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)... (324)

<223> n = A, T, C or G

<400> 290

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ggggatctct	tcctggggac	accatcagca	cctggaccgc	ctgggtccca	cttcttccct	120
tttggtccag	gacttcacaa	acctctctt	ctccagga	ttccttgca	accaggagta	180
ccancagcac	caggtggccc	aggaggacca	gtagccacct	ttctctctt	gggaccaggg	240
ggaccagctc	cactctctag	tcctggggcc	cctggcaatc	caggagggtc	tcctctccct	300
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<210> 291

<211> 278

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)... (278)

<223> n = A, T, C or G

<400> 291

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agagtggagg	gcctggagac	cgacaacgg	aggutggaga	gcacatccg	ggagcacttg	180
gagaagaagg	gaccccgagt	caggagctgg	agccattact	tcagatcat	cgaggacctg	240
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<210> 292

<211> 299

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(299)

<223> n = A,T,C or G

<400> 292

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actcgggagc	ccgggacctc	gatgatcttg	aaglaunggc	tcagctctct	gacclggggc	180
ccctctctct	ccagtgctc	ccgggclllg	ctctccagcc	tcgggtlcll	gggtctccag	240
ncttctcact	ctgtccagga	aaaggggcca	ggcggnccat	cagggctttt	gcattgact	299

<210> 293

<211> 101

<212> DNA

<213> Homo sapien

<400> 293

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<210> 294

<211> 285

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(285)

<223> n = A,T,C or G

<400> 294

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tcctcgggct	cagagtgllg	tactcgtaaa	acacggatca	tcgatgttgt	ctacaatgca	180
tctaataacg	agctgggttc	taacggagac	ctggcgaaqa	attgacacgt	gcctcctmpc	240
agcacaccgt	accgacagtg	ggtacggag	tcacactatg	cncct		285

<210> 295

<211> 216

<212> DNA

<213> Homo sapien

<400> 295

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ccacgtgcc	ggattaccgg	ctacatcacc	aatatgaga	agcctgggtc	tcctccca	120
gaagtggctc	ctccgagcgc	ccctggggtc	acagaggcta	ctatttctgg	cctgggaacc	180
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<210> 296

<211> 414

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(414)

<223> n = A,T,C or G

<400> 296

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gnccaglaat	agtagcctct	nlgaacacag	ggcggggnag	agggaccact	tcctcgggag	180
gagaccacag	ctctccatcc	ttgatgata	agccagtant	ccctggcccl	ggcgggctgc	240
catgataccn	ccanagact	gggtgtggcg	gacctgcccg	ggcgggccgc	tcnaggggac	300
gacttctctg	aaqantobuc	atcacacttg	ggcgggcccg	tcgaaccatg	ctctctcagc	360
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<210> 297

<211> 376

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(376)

<223> n = A,T,C or G

<400> 297

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ttcctgcctc	agccacccca	agggaaagct	cnogctggcg	gcctctcccl	ccgggtgat	180
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ccagcagaat	cgaaacattt	gggaacccaa	gaagggggag	cccgcaagga	aaccccccac	300
gcacclggcc	gngaacctcc	anagcagcgc	ccctctcttg	actgggggaa	aaagggaan	360
ntacttggac	tlggac					376

<210> 298

<211> 357

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(357)

<223> n = A,T,C or G

<400> 299

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ctgggaatcca tcggtcatgc tctgcgcgaa ccagacatgc ctcttgctct tgggtttctt      120
gctgatgtac caattcttct gggnacacac gggtcgagtg ggtacacgc aggtctcac      180
agtctccatg ttgcagaaga ctttgatggc atccaggttg cagccttggt tgggttcaat      240
ccagtactct cttctcttcc agtcagaagl ggcacatctt gaggtcacqy cagggtcggg      300
gcgggggttct tgggggtgc cttcttgggc tcccggaatg kctnnngaac ttctctg      357

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<210> 299

<211> 307

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(307)

<223> n = A, T, C or G

<400> 299

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ctctctggag agtggggcca naagcttcca ggttgagggt tctgggaacc tccggaggac      180
gagggctnaa tccatggaat ttgtggaagg cctgatgac caccagcggg accttcttaa      240
ctactacgtt gacatttctt tgtgcgcac gtgttgcctc naccnnnggtt ggttgagcat      300
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<210> 300

<211> 351

<212> DNA

<213> Homo sapien

<400> 300

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gggcattggc aggggctctg gcttccacc ctctgtctct gggatcggtt tgggtgggag      120
tatctcatct ttgggttcca caatgctcac gttgtcaggc aggggcttct tagggccaat      180
cttaccagll ggttccaggg gcagcatgat ctccaccttg atgccagca caccctgtct      240
gagcaacacg tgggcgagag caagtctcaa cgtaaagtaa ttaaccaggt ctccgctctg      300
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<210> 301

<211> 330

<212> DNA

<213> Homo sapien

<400> 301

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gttcagggtg taggggcaca gctctttgat gccattggcc agttggctca gctcccagta      180
cagccgctct ctgttgagtc cagggttttt ggggtcaaga tgaatgagtc aggttgcata      240
cactccagtc gctgtcccat cttcttcgga cctgagagag gtccagtctg agccagagta      300
cagagggcca cactcgtgtt tctttgaata      330

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<210> 302

<211> 317

<212> DNA

<213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(317)
 <223> n = A, T, C or G

<400> 302
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 agctggggcc ctacacccctg gacagggaac gtctctatgt caatgggttc amprateaga 120
 gctctgtgnc caccacccagc actcctggga cclaccacagt ggatttccaa acctcagggg 180
 ctccatcttc cctctccagc cccacaallc tggctgctgg cctctcctg gtaccatlln 240
 ccccaactt caccatccacg aactctgcagt atggggagga catgggtcac cctgnetccn 300
 ggaagtican caccaca 317

<210> 303
 <211> 283
 <212> DNA
 <213> Homo sapien

<220>
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 <222> (1)...(283)
 <223> n = A, T, C or G

<400> 303
 tcgagcggcc gcccgagcag gtctggggcg ataccacccg gcattatcttg gaatggatga 60
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 ggtgctggct ggtanggggt gattacaggg ttgggacag ctogtacact tgcattctc 240
 tgcattctc tggllaglgag gtgagccln cctctctctt ttg 283

<210> 304
 <211> 72
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc feature
 <222> (1)...(72)
 <223> n = A, T, C or G

<400> 304
 agcgtggtcg cggcggaggt gaggcacagg tgacccgggc tgaagctggg gctgctggnc 60
 ctgctggtec tg 72

<210> 305
 <211> 245
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(245)
 <223> n = A, T, C or G

<400> 305

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hgggggcagg	nggacccgac	tcacacccgtt	cacacgggt	tcacacggga	ccagcagggc	180
cagcaggacc	agcagcnc	gcttgcgcc	ggtaacctg	ngctcacc	ggcggcnc	240
acgt						245

<210> 305

<211> 246

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (246)

<223> n = A, T, C or G

<400> 306

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agcgtggg	gctggggg	cgacaccc	ngcgtggg	ggcgggggt	ggcgggggt	180
gagcgggg	gaccccggt	cagcgggt	gagccttcc	ttcggggt	tcggggggt	240
lccggg						246

<210> 307

<211> 333

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (333)

<223> n = A, T, C or G

<400> 307

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cctcctctg	tcagcgaag	agcgggggt	ggcctctga	ggcctctga	ggcctctga	300
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<210> 308

<211> 310

<212> DNA

<213> Homo sapien

<400> 308

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<210> 309
 <211> 429
 <212> DNA
 <213> Homo sapien

<400> 309
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<210> 310
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<220>
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 <223> n = A,T,C or G
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 <211> 2996
 <212> DNA
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<210> 312

<211> 914

<212> PRT

<213> Homo sapien

<400> 312

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Asn Leu Val Pro Arg Leu Pro Ala Leu Ser Trp Cys Tyr Ser Leu Ser
35 40 45
Thr Ser Pro Ser Pro Thr Cys Gly Met Arg Arg Thr Cys Ser Thr Leu
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Ala Pro Gly Ser Ser Thr Pro Arg Arg Gly Ser Phe Arg Ala Trp Ser
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Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu
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Thr Leu Leu Arg Pro Glu Lys Asp Gly Thr Ala Thr Gly Val Asp Ala
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 Ile Cys Thr His His Pro Asp Pro Lys Ser Pro Arg Leu Asp Arg Glu
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 Gly Pro Tyr Ala Leu Asp Asn Asp Ser Leu Phe Val Asn Gly Phe Thr
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 His Arg Ser Ser Val Ser Thr Thr Ser Thr Pro Gly Thr Pro Thr Val
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 Tyr Leu Gly Ala Ser Lys Thr Pro Ala Ser Ile Phe Gly Pro Ser Ala
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 Ala Ser His Leu Leu Ile Leu Phe Thr Leu Asn Phe Thr Ile Thr Asn
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 210 215 220
 Thr Gln Arg Val Leu Gln Gly Leu Leu Arg Pro Leu Phe Lys Asn Thr
 225 230 235 240
 Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro
 245 250 255
 Glu Lys Asp Gly Glu Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg
 260 265 270
 Pro Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu Gln Leu Tyr Leu Glu
 275 280 285
 Leu Ser Gln Leu Thr His Ser Ile Thr Gln Leu Gly Pro Tyr Thr Leu
 290 295 300
 Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val
 305 310 315 320
 Pro Thr Thr Ser Thr Gly Val Val Ser Glu Glu Pro Phe Thr Leu Asn
 325 330 335
 Phe Thr Ile Asn Asn Leu Arg Tyr Met Ala Asp Met Gly Gln Pro Gly
 340 345 350
 Ser Leu Lys Phe Asn Ile Thr Asp Asn Val Met Lys His Leu Leu Ser
 355 360 365
 Pro Leu Phe Gln Arg Ser Ser Leu Gly Ala Arg Tyr Thr Gly Cys Arg
 370 375 380
 Val Ile Ala Leu Arg Ser Val Lys Asn Gly Ala Glu Thr Arg Val Asp
 385 390 395 400
 Leu Leu Cys Thr Tyr Leu Gln Pro Leu Ser Gly Pro Gly Leu Pro Ile
 405 410 415
 Lys Gln Val Phe His Glu Leu Ser Gln Gln Thr His Gly Ile Thr Arg
 420 425 430
 Leu Gly Pro Tyr Ser Leu Asp Lys Asp Ser Leu Tyr Leu Asn Gly Tyr
 435 440 445
 Asn Glu Pro Gly Pro Asp Glu Pro Pro Thr Thr Pro Lys Pro Ala Thr
 450 455 460
 Thr Phe Leu Pro Pro Leu Ser Glu Ala Thr Thr Ala Met Gly Tyr His
 465 470 475 480
 Leu Lys Thr Leu Thr Leu Asn Phe Thr Ile Ser Asn Leu Gln Tyr Ser
 485 490 495
 Pro Asp Met Gly Lys Gly Ser Ala Thr Phe Asn Ser Thr Glu Gly Val
 500 505 510
 Leu Gln His Leu Leu Arg Pro Leu Phe Gln Lys Ser Ser Met Gly Pro
 515 520 525
 Phe Tyr Leu Gly Cys Gln Leu Ile Ser Leu Arg Pro Glu Lys Asp Gly

530	Ala	Ala	Thr	Gly	Val	Asp	Thr	Thr	Cys	Thr	Tyr	His	Pro	Asp	Pro	Val
545						550					555					560
	Gly	Pro	Gly	Leu	Asp	Ile	Gln	Gln	Leu	Tyr	Trp	Glu	Leu	Ser	Gln	Leu
					565					570						575
	Thr	His	Gly	Val	Thr	Gln	Leu	Gly	Phe	Tyr	Val	Leu	Asp	Arg	Asp	Ser
					580				585						590	
	Leu	Phe	Ile	Asn	Gly	Tyr	Ala	Pro	Gln	Asn	Leu	Ser	Ile	Arg	Gly	Glu
					595			600					605			
	Tyr	Gln	Ile	Asn	Phe	His	Ile	Val	Asn	Trp	Asn	Leu	Ser	Asn	Pro	Asp
		610					615					620				
	Pro	Thr	Ser	Ser	Glu	Tyr	Ile	Thr	Leu	Leu	Arg	Asp	Ile	Gln	Asp	Lys
					630						635					640
	Val	Thr	Thr	Leu	Tyr	Lys	Gly	Ser	Gln	Leu	His	Asp	Thr	Phe	Arg	Phe
					645					650						655
	Cys	Leu	Val	Thr	Asn	Leu	Thr	Met	Asp	Ser	Val	Leu	Val	Thr	Val	Lys
					660				665						670	
	Ala	Leu	Phe	Ser	Ser	Asn	Leu	Asp	Pro	Ser	Leu	Val	Glu	Gln	Val	Phe
					675			680					685			
	Leu	Asp	Lys	Thr	Leu	Asn	Ala	Ser	Phe	His	Trp	Leu	Gly	Ser	Thr	Tyr
		690				695						700				
	Gln	Leu	Val	Asp	Ile	His	Val	Thr	Gln	Met	Glu	Ser	Ser	Val	Tyr	Gln
		705				710					715					720
	Pro	Thr	Ser	Ser	Ser	Ser	Thr	Gln	His	Phe	Tyr	Leu	Asn	Phe	Thr	Ile
					725					730						735
	Thr	Asn	Leu	Pro	Tyr	Ser	Gln	Asp	Lys	Ala	Gln	Pro	Gly	Thr	Thr	Asn
				740					745					750		
	Tyr	Gln	Arg	Asn	Lys	Arg	Asn	Ile	Glu	Asp	Ala	Leu	Asn	Gln	Leu	Phe
			755				760					765				
	Arg	Asn	Ser	Ser	Ile	Lys	Ser	Tyr	Phe	Ser	Asp	Cys	Gln	Val	Ser	Thr
		770				775					780					
	Phe	Arg	Ser	Val	Pro	Asn	Arg	His	His	Thr	Gly	Val	Asp	Ser	Leu	Cys
		785			790						795					800
	Asn	Phe	Ser	Pro	Leu	Ala	Arg	Arg	Val	Asp	Arg	Val	Ala	Ile	Tyr	Glu
				805					810						815	
	Glu	Phe	Leu	Arg	Met	Thr	Arg	Asn	Gly	Thr	Gln	Leu	Gln	Asn	Phe	Thr
				820					825						830	
	Leu	Asp	Arg	Ser	Ser	Val	Leu	Val	Asp	Gly	Tyr	Phe	Pro	Asn	Arg	Asn
		835					840					845				
	Glu	Pro	Leu	Thr	Gly	Asn	Ser	Asp	Leu	Pro	Phe	Trp	Ala	Val	Ile	Leu
		850				855						860				
	Ile	Gly	Leu	Ala	Gly	Leu	Leu	Gly	Leu	Ile	Thr	Cys	Leu	Ile	Cys	Gly
		865				870				875						880
	Val	Leu	Val	Thr	Thr	Arg	Arg	Arg	Lys	Lys	Glu	Gly	Glu	Tyr	Asn	Val
				885					890						895	
	Gln	Gln	Gln	Cys	Pro	Gly	Tyr	Tyr	Gln	Ser	His	Leu	Asp	Leu	Glu	Asp
				900					905						910	
	Leu	Gln														

<210> 313

<211> G56

<212> DNA

<213> Homo sapiens

<400> 313

```

acagccagtc gagctgcga gtgttctggy tggatcggy alwtgcactc aaaatgctct 60
ttgtaaagga aagccacaac atgtccang gacctgaggg uacttgagg ctgagcaaaag 120
tgcagtttgt ctacgactcc tgggagaa aaacatlcac agacgcaglc artgctggga 180
agcacacagc caanlcgaa cccctctctg cctlgctcac ccccgctyng nagtctatg 240
agtqtnaagc tcaacaaacn atttcaotgg cctctagtga tccgcagaaq acggtcaca 300
tgcctctgtc tggggtccac atccaaactl ttgacattat ctcaqatitt gtcttcagt 360
aagagcataa atgcccagtg gatgagcggg acaaacctgg agaaaccttg cncctgattt 420
tggggctcac ttgagcctc gtcatcatgg taacactcgc gatttaccac qtcacaccac 480
aatgactgc caaccaggtg cagatccctc gggacagatc ccagctatag cacatgggcl 540
agaggccgtt aggcaggcac cccctatttc tgcctcccca actggatcag gtagaacac 600
aaaagcactt tccatcttg tccacagat acaccacat agctacaatc aaacng 656

```

<210> 314

<211> 519

<212> DNA

<213> Homo sapiens

<400> 314

```

tgrgcytggg ccagtcagct tccgggtggy actggagcag ggcttclmgt cttcttcaga 60
qlacccttgc aggggttngt quagctgctc ccctccatgl acanctccca gtccactgat 120
qittaaagga ggtctgggtg gttaggccca ctgagabaaa ctgagtcaca tactctcaca 180
cagttatggt caactgggct ctctgacacn qngaggaagg tggcgggclt tgggtgttgc 240
aaacttcact qtttatngg qnatgttcac agagcaagcl ttgttateta gctagictag 300
cattcattag ctatgtgtgt cctttggtat ttatlcagat caccacagca tagggggac 360
ttatgtttag gttttgtcta agagttaget tatctgcttc ttgtgctaac agggccattg 420
ctaccagggg ctttgagcat gggggccagc qtttgaaac ctcaatagt ttttttgaga 480
gataaggaac bngccttnga cctngggcgc gaccacgel 519

```

<210> 315

<211> 441

<212> DNA

<213> Homo sapiens

<400> 315

```

cacagagcgt ttatlcagac cctcacctct gnaattggg alllcttatt aggttccct 60
aaaagllmca algttgatn cctctacata gtcacatela tcaantgaag gcagttctct 120
cagagggcann cagggtttat agtgcaggt aaalykctc tottttgtgc tactlganlca 180
ttgtcaaacg tctctgcact gtttccagcc lctccacgtt gcctclgtcc tgcctcttag 240
ttccttcttt gtgacaaacn aaaaagabaa gaggatttag aacaggaactg cttttccct 300
atgatllcaa atttccatg acttccgccc ttgggagaaa ttccaaagga aatctctctc 360
qctcgtctc tccgttttc tttgtgagct tctqngggag ggttaglqgt uactttttga 420
tacgaaaaaa tgcattttgt g 441

```

<210> 316

<211> 247

<212> DNA

<213> Homo sapiens

<400> 316

```

tggcgcggt gctggatttc accttcclgc ccttgcgggt gaggccttg ggtctaaagg 60
ggcgggatac tccattatgg cccclnqccc tqtagggctg ynatagttag aaaagycac 120
ccagtctagc ttggtlaagaa gaggacatg ccccaaccl cggcgcccl lllccclcag 180
atctgclglc cttactlcag ngcctgcagg agctccaccl ncaagaaaaa ngcctlgayc 240
ngctnac 247

```

<210> 317
 <211> 409
 <212> DNA
 <213> Homo sapiens

<400> 317
 tgacaggggt cctggagttg ttaagtcacn nartagctgc agggatgga cactgcacac 60
 cacgatgtgg gatgaacagc agccttgggt tgtagccnny ngtgtccatg gatttgaccc 120
 gaatgtcccc tggagggnccl gtyyngagga caggcacttg atggccaga cctctcggct 180
 ggaggagtgg tggagccagg acitgggcctt caggccatgag ggctayata acctgacccc 240
 ttgcattcta acactgggtc attaatgaca cctttccagt ggtgtttgca aaaacccan 300
 ctgtcayggc ntlggcncctg ggaaygctca ggtgagctca ccaggagagg ttaagccaa 360
 ccsaagggta gkkaacaccc aacaccaggy gaacccagcc cccaaaccc 409

<210> 318
 <211> 320
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)... (320)
 <223> n = A, T, C or G

<400> 318
 caaggnagat cttaagnggg gtentatgta agtglyctcc tggctccagg gtterctggag 60
 cctccnngagg ttaaggggac ccttgtagaa cccnccagc agcatcactt cgtgaaggat 120
 ntcattngtc aqqaagctgt cctggaagta ggccatctcc acclccatqy gnatgccata 180
 gtcaatgggc ctttgcctgg gagngggcat caccagana nngagatct tggactcggg 240
 gectgggttg ccagaatagt aaggggagca nagcaaggctc aggcagggtt ggaagccatt 300
 gctggagccc tgcagccgca 320

<210> 319
 <211> 212
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)... (212)
 <223> n = A, T, C or G

<400> 319
 tgaagcaata ggggtcccat tttacnnggg gagcatggaa gcccqagagg tgggtggggg 60
 agggggtcct tccctggctc aggcanttg gaagatgagq aagccgctga agacgtctc 120
 ggctcagag ccttggtaaa tgtgacccct ttgggggtct tttcaaccc anacclggln 180
 acctgtctgc agacclcggc cgcgaccatg ct 212

<210> 320
 <211> 769
 <212> DNA
 <213> Homo sapiens

<400> 320

```

tggaggtgta gcagtgaag gagatgtac gcaagagtg tccagcagag cctcaaaccc 60
tccaaactac cagtgaagga tgaagatgcc cagtaclcaa ccttcatttc ctgggcccac 120
tggagggcgt cttctctccat cagcgcatac tgaagcaggg tactcagalc cttcttgaa 100
cctacaagga agaggaagcac actggaaggg tcaattctct tcagggatc ggccagccac 240
tgctgccat gggaggtgga aagtaaggg tgaatgagtc tgcagggccc ctcctatga 300
cattcaatgg cccaattacc cttctctctg tctacalgc attctcttc ttcctgaaca 360
ccctctgtt ctgaacctc tctcccgga gctcccaatt atattgcagg atgctcaatt 420
acttggtatg ttccagagat gccacatcat tcaagttaga gacaalgat atggttga 480
agagtggcag aaacagcccc aggttgaag ggaagacact atgtctcatt tcccaatcc 540
ttccagctcc atatgagaa gccatgtgca ctctggagcc cactacccc attcaacca 600
gccccttacc ttgagctcct ctatagtagg tlgatgcaat gcatttgaac ctctctgac 660
cagcgttatc ccaactggaa ggaaggaag gtgaagcaca gttatgtatc ttgggggtc 720
tgggtgctgg ggaagagga tngctggaag ggggtlgaag gcaatcaca 768

```

<210> 321

<211> 690

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> {1}... (690)

<223> n = A, T, C or G

<400> 321

```

tgggtgctgg ggggcacctg tctctgacg gccagacagc gctcgaagcc tttgtcctg 60
cctactcccc cggaggcaac tgggaggtca acggyaagac atcattcccc tataagaag 120
glgncgggky ttctctctgc acagccagtg tclaaagctg cttcaagcc cgggacalc 180
cagggggcgt ctgtgagggc ccaaggaalc cttgtgcct gagctgacg accctatga 240
gtctcaacat cagcaactgc caatgccact gtccccctgg ctacacgggc agataccgc 300
aagtgaagtg cagcctgcag tgtgtgcag gccgylkcc ggaaggagag tctctctg 360
tctgtgacat cggctacggg ggagcccagt glquacccaa ggtgcatttt ccttctaca 420
cctgtgaact gaggatagac ggagacagc tcatggtgtc ttcagagya qacccattt 480
acagaagcca ggatgaatg tcagaggaat ggggggglg tngccagat ccagagccag 540
aaagtgcagg acatctctgc cttctatctg ggcggcclq ngccacccaa cgaggtgact 600
gacagtgaat ttgagaccag gaacttctgg aluqgctca cctacaagac agccagggac 660
tcttccgcl gggccacag ggaatccca 690

```

<210> 322

<211> 104

<212> DNA

<213> Homo sapiens

<400> 322

```

gtcgaagcc agagcaccac cctgtagcct ttccgaaal acaggaactt ctctctccc 60
acgtccatc caggacalc atgagcagg accacacat ggtc 104

```

<210> 323

<211> 118

<212> DNA

<213> Homo sapiens

<400> 323

```

gggccttgg cgttccaaa tgacccagg agtggtctgc gacgantgc ctaatglaa 60
actagtgaat gaggacgaa cactggaat agaaataag cctggggtga gagacgg 118

```

<210> 324
 <211> 354
 <212> DNA
 <213> Homo sapiens

<400> 324
 tgcctcctcgg gagcttgaag aagaaactgg ctacaaaggg gacattgncg atgtttctcc 60
 agcggcclgl. ALggaccacg gcttgcacaa ctgtactata cacttcgtga cagtcaccat 120
 taacggagat gatgcgaaa acgcanggoc gaagccaaaq ccaggggatg gagagtl.lgl. 180
 ggaagtcatt tctttaccoc agaatgacct gctgcacaga cttgatgctc lqgtagctga 240
 agannctc. anagtgagc ccagggctca lccctacgct ctagecgtga accatgcaaa 300
 tgcaaaagoc tttgaagtgc ccttcttga attttaagcc caaatatgac actg 354

<210> 325
 <211> 642
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc feature
 <222> (1)... (642)
 <223> n = A, T, C or G

<400> 325
 ncatgctga atgggtctct ggtgagagat tgcaccttgg tggtagaaca atcglglglg 60
 cccactgata ccaagaccaa tgaagagagc acagtttaagc agccttccct ctcatttcca 120
 ggcacttcaa taagglagctg attggtcctt gcaccagcag tggtagtcgt acctatttca 180
 gaggaggtctg anattcaggl. lcttagtflg ccaaggacag gccctacctt atattttttt 240
 ccattctcat catccacttc tcttaccgt ttgtgctta caataactla atgatggatt 300
 gagttatctg ggtggtctct agccatctgg gcagtgtgg. lchgrctaac ccaagggccl. 360
 tggccclcaa cctgcattt ggittagggg ctaacagggc tccacagatn atctccacac 420
 acatgtaact gctggagalc ttattctatt atgactaaga aacgagaagt tttccaaaq 480
 tgttagtcag gatctgaagc clgtccllca qataacccag cttttcctt tggcctttag 540
 cccattcaga ctttgcagag gtcnagccaa ggattgctt. lllgctacag lcttctgcca 600
 aatggcttag tctctyagta cctggaaacc agagagagag ag 642

<210> 326
 <211> 455
 <212> DNA
 <213> Homo sapiens

<400> 326
 lccgtqaggc tgaacttoga qttacttccc aggcactgca ggggcacagc caggltcaalc 60
 acctccacct tctcgtctct cctgctcttg tcaattgacaa acttcccgtc ccaaggcattg 120
 acgatgatga ggccattctt ggaactctct gcctcaalln tccctoggac agattcctgc 180
 atcagccggc cagcggactc cgcctcttgc ttcllctgca gcacatcggg ggcggcgtt 240
 lccctctgct tctccaatlc attctcttllc tnagccctga ggtatggctt gatgatkaga 300
 cggtagctgg caaagttagc caclagaggg cccacggctg calagagcct ggcctctggc 360
 agaagctggc ccgtcaagtq actaggggaag aagtatgtct gacttggcct gtttagcttg 420
 accttgagag aacgcctctg tggacttcca acgct 455

<210> 327
 <211> 321
 <212> DNA

<213> Homo sapiens

<400> 327

```

ttcactgtga aotogcagtc ctogatgaac tgcacagat gtgacagccc tctctccttg 60
ctctctgagt tctcttcaat gatgctgatg atgcagctca cgatagcgcg cltctactca 120
nagcncnccct cttcccgag catggtgaa: aggaagtcca taaggacggc rtgtttgaga 180
ggatatttct gacccagggc atgtatggcc tggacaacca cttcccttga ttcatccgag 240
attcttgaca tgaaggagga gatctgcttc atgaggaggt cgtgctgct ctcgclggcc 300
gtcttaaggg yggctggtgat g

```

<210> 328

<211> 476

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> {1}...{476}

<223> n = A,T,C or G

<400> 328

```

tgcaggaggg gcatggggg cctggaatgg gctcagccc catggtgtcc ctgataaacc 60
cagtgtgcag tctgatgaag tctgggtggg tctggtctac gggctggcag ctacccagat 120
ccaggagga atgcactcct ttcccatct ctcaccacac tctatctcgg cctcaggaacc 180
cttcccttca cctcaggaacc aatttcttt caagggccta acccaatgc catccttgg 240
cgggtctaat aagcctccc ccaclllllc cctggtatgc attccaggc tccctggcct 300
tncagggett norgtctgt ggtcctatgt tatctcctcc caattgctgg gagctccttg 360
naggcagaga ctctactgcc tccatctatc cagtggaggt ggtctctcag aggtctgccc 420
attagtatyl atgactgtca tctctcccaa cagggcclga cltggagggg ctcca 476

```

<210> 329

<211> 340

<212> DNA

<213> Homo sapiens

<400> 329

```

cgaggagagat tctcaggaac ctgatggaga gtcagatgat ggagatcttg tcaagtctag 60
ctaagggtga ccacagccct gtcagagagg ctgctgcagg ctgctggac aaagcagtyg 120
aatatggget tatccaaacc aaccaagatg gagagtggg yggcttggcc tgggcccagg 180
gtctcttacc agctcacta ttgtggcag gagagtcagg acagagcag ctttggctgg 240
tggtggctgg catcccaat cclcllccc atcctgctt gctgcctag gatgctct 300
gtctgtagtc agcggccaag ttcagtcaca cagcctgct

```

<210> 330

<211> 277

<212> DNA

<213> Homo sapiens

<400> 330

```

tgtcaccatc acattggtgc ccaataccac gaagacatcg tagatgagg gtcagggcag 60
caggatgcag ccagtgtga cattgttgag gtgcaggagc tctactccat taaggagagg 120
ggccaggcca aagaggttgt tggcaatcca gtgttctct agcaggtacc agacggcaac 180
gatgctgclt aggcacagga acaccaggtc cltgggtgca aatcctnat tgatgatct 240
ctccttgttt tccagagacc ctgtgtgaag agtcagac

```

<210> 331
 <211> 136
 <212> DNA
 <213> Homo sapiens

<400> 331
 ttgcttccca cctcctttct ctgtccctc ctgaggttct gcttacaat ggggacctg 60
 atacaaacca cacacaaat gaggatgaaa acagalaaca ggtaaaatga cctcactgc 120
 ccggcgggcc gctoga 136

<210> 332
 <211> 184
 <212> DNA
 <213> Homo sapiens

<400> 332
 ttgtgagata aaagcagata ctccatgca ttaaaagct tgaataact atcagggag 60
 ttgctgctct tattgttct taagttaga gttggaagag agacaggag accaagagg 120
 agtctggtc tttgatigaa gctcaagtca aggtattoga gtgatttaay accttttaaa 180
 gcag 184

<210> 333
 <211> 384
 <212> DNA
 <213> Homo sapiens

<400> 333
 cggaaaactt ctagganttg ctccatgca tgggggtgaa ttggaagct aggaaggttg 60
 ctgtggtctc aggttccaag ctagcagtg agatcaaca ggaagagag acctttctca 120
 tcaaaactc caccacagtg cgcaccacag agalcaact caaggttggg gaggagtctg 180
 aggagcagac ttgtggttgg aggccttgta agagcctggt gaaatgggag agtgagaata 240
 aatggtctg tgagcagaag ctctgaagg gagagggccc caagacctc tggaccagag 300
 aactgaccaa cagtggggaa ctgactctga ccatgagag quattagctt gtgtgcacca 360
 ggtctatag. ctagaggtga gcgg 384

<210> 334
 <211> 169
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1) ... (169)
 <223> N = A, T, C or G

<400> 334
 cnacaaacag agcagacacc ctggalcaag tctgtactt ggcaggaag gctggacctt 60
 aazattgaat ttcaacttc tgaccgccc cagaagagat agttttctc caactatcct 120
 agcaagatga acctctctga ggaggttgac ttgggaagct atgtngccc 169

<210> 335
 <211> 185
 <212> DNA
 <213> Homo sapiens

<400> 335

```

ccagggtttgc agcccagget gcacatcagg ggactgcctc gcaatccttc atgctgttgc 60
tgctgactga tggtyctgtg acggaatgtg aagccacacg tgaagctgtg gtgcgtacct 120
cgacctgac catgtcagtg atcattgttg gtgtgggttg tctgacttt gaggccatgg 180
agcag
185

```

<210> 336

<211> 358

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(358)

<223> n = A,T,C or G

<400> 336

```

ctgcaccttc cttaacggcg ccagaaacac acccaggatg gcattggccc caaaccttgc 60
tttgttttca gtcccatcca actcagacat caggttgctc agllctcttc gtccacacac 120
agagagacct gagctgatga ggcttgccgc gatggtggag ctatgtgtgt cactgcctt 180
caggacacct ttgcctaat aacgttgttt gtctcctacc ctacgtcca ggccctcata 240
gatgcacctc gaggctcacc tgggcactgc agctcggaaa agaccttgg cagtatagag 300
atccacctcc actgtgggtt tcccgaggga gtccaggatc tcccgggccc agacttcc 358

```

<210> 337

<211> 271

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(271)

<223> n = A,T,C or G

<400> 337

```

caccaagccc caagccnngg aatcagaat ttactctgtg caactgacti gtaatagcca 60
gaaatcctgc ccagcatggg attcagacc ttgtctgcaa ccaaatccac cgtcaaaagt 120
catacaggat aaaacaaatt caattgcctt ttccacatla ctatcatcan gcttccccau 180
caaaagccaa gt.tgcacacg cacaaaaaga gaactctgtg tcaattttct cacttttat 240
aaaagttagt ttttcacatc caatgaagca n
271

```

<210> 338

<211> 326

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(326)

<223> n = A,T,C or G

<400> 338

```

ctgtgctccc gactngncca tctcaggtac caccgactgc actggggggg gccctctggg 60
gggaagggtl ccacggggca gggatacacc tggggggcag tctctctctg gaggcagccc 120
actcagggtca aagattttgc ccaactggkc ggttccagag ttccacaga agagaggcct 180

```



```

tcgacgaacc atctctgcna agatacagcc aacctccac atgtccacag atgttgcata 240
lgtggactgc nqaagaactt cgggagctcg gtaccagatg gtaaccaaca cgggtgcaag 300
tgccatctgg tagctgtaga tttctgg 326

```

<210> 339

<211> 260

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(260)

<223> n = A,T,C or G

<400> 339

```

ttcaacctgag gactcatttc gtaccccttg ttgacttcaa gcaaaagacct tcanggtctn 60
caaggacgnc acatttccac ttgogaatgn nclcanggct calcttgaag aanaagnanc 120
ccaagtgtcty gatcccagac tggggggtaa ccttgtgggt aagagctcat ccagttlctg 180
chlttgggagc tcccttctact cgggggggact tgaagccctg ntggatgggg ccclycttgg 240
ccttgggggc gaccacgcta 260

```

<210> 340

<211> 220

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(220)

<223> n = A,T,C or G

<400> 340

```

ctggaagccc ggtctgggct ggcagcggaa ggaagccagc aggttcacgc atcgtgtctg 60
gcagtagcgg tggggggcct cgtctatctc cccacactcg ggcctcatct tggggtaac 120
atcagggcag gtgcactgat aggaagcagg caagttatcg cagtcttggc tggggcgaca 180
gtcgtgcagg gcttggggac actcgtccac atccacacag 220

```

<210> 341

<211> 384

<212> DNA

<213> Homo sapiens

<400> 341

```

ctgctaccag gggagtcaga gtgacatctc ccagctctgg clautgtatt ctacgccatg 60
gatggagctt cccacgattt tcttctgctg cagcggcgaa ggtctctac tgcacaccg 120
ggcgtcaca gtggccctgc tttctcagga actcctcaga gtgagggagg aggggggccc 180
tttccacagg tcaaggccac agggaggaag attgcacagg cactgttctg aggggggagg 240
cccgttggct tacagaagtc atggtgttca tcttcagatg gggtagccat ccttgaatgt 300
ggcaattata tcacattgag acagaaatc aaaaaggag ccagtcaccc tggggcagtg 360
aagtgcaccl ggttaccag acag 384

```

<210> 342

<211> 245

<212> DNA

<213> Homo sapiens

<400> 342

```

ctggctaaac tcatcattgt tactggctgg caccatgccc ttgaagctta aggcgaagcaa 60
tgtaaccaac aagaatgacc ccaagctccat caactctega gtctctgattg gaacacacaa 120
cacagctctg gtgaagaaat cagatgtgga gaccatcttc tctaagtatg gccgtgtggc 180
cggctgtttt gtgcacaagg gctatgacct tgttcaglac tccaatgagc gccatgcccg 240
ggcag                                     245

```

<210> 343

<211> 611

<212> DNA

<213> Homo sapiens

<400> 343

```

cccaaaaat ccagntttaa tttttttatt tggactgaaa aactaatcat aactgtttaa 60
tctcagccat ctttgaagct tgaagaagaa gtcttttggt ttttgtaaac gtlagccagc 120
tttcttgcca gtgtcagaaa atccclnttt tgaatccctt cgggtattct lyytatctga 180
aaaaatatac aattatgccc atacatgagt tatttctnng ttgaaaaa atttttaaac 240
tgcataccac taattcaaaa atacaagctc tggcaaaaat atttttcttc atttttaaac 300
tttttttaac taataatggc ttgaaagaa naggottaat tlgggggttg taactaaac 360
caaaagaaat gattgacttg agggctcttc tttggtaaag ataatcatt agcttazala 420
agcaggaaga gtttattttt ntttatgtag ctctcgttca tattaagtg ttttctctc 480
ttttacctca ntttgaacag ataagtttgc ctgcatgccc gacatgccc agaacatga 540
atagcccgta atagatcttg ggaacalggc tcttagagtc ctltgggata agttottata 600
taaalancac n                                     611

```

<210> 344

<211> 311

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> {1}...{311}

<223> n = A,T,C or G

<400> 344

```

notcgaazaa gcccaagaca gcagaaagag acacctccag cnaactagca aagaaaagca 60
aagaaylall cagaaagag atgtcccagt tcatcgtaca gtgactgaac ccllaccagc 120
aacctgactg caaagtggga agaattacca caactgaga ctttaaaat ctggctcaga 180
agctgactca cgggtttatg aataaggggc tgaagtactg laayaatcct gaggaactgg 240
agtgaatga gaatgtyaaa cacaacaccc aggantacal tannaagtae atgcannaan 300
tttggggctt g                                     311

```

<210> 345

<211> 201

<212> DNA

<213> Homo sapiens

<400> 345

```

ccacaggta tccgactgc caacctgggc gcccaaggccc tgtgnaagga gccgggcagc 60
actgtcaca tgagtgtgga tctgagtggt gtgcccattg tcagggaact tctcaggtac 120
tttaactccc gaaggattga calaaccttg tegtactga aglqottcca caagctggcc 180
tetgactatg gggcaggca g                                     201

```

<210> 346
 <211> 370
 <212> DNA
 <213> Homo sapiens

```

<400> 346
ctgctccagg gcgtaggtgt ccttcgtggc ccttgcctcc tccgaggagc caggctgtgt 60
tctcttcaga atgtttctga gcagcaattt gaggcgggtg atgcgttqga agggcagaa 120
cagcagagac ttgaggggag ggcgtgtgca gacggggctc ctctccagct tcctcagagc 180
ctcccggaat ttgctgttgc tattcatcag gcctctggaag gtgcgttctt gataggtctg 240
gttgggtgac taaggcaggt agacccggcg gaagtctggg gcgtggctcc gaactacgtc 300
acataacttg cagcagagag tcttcttctc aaagtctctc kccaggtctg aaaggaactg 360
ggcgtgacg
370
  
```

<210> 347
 <211> 416
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)...(416)
 <223> n = A,T,C or G

```

<400> 347
ctgttgtgtc ttgtcttqac gttggcttla ccatgagtaa ctccattcct ggtatagaa 60
cccatttga acacgcaagc aaggtgatca ccattgttgt acagcagacg ttgtttgtc 120
agacaaagga tgagatttgt ttagtctgtt ttggtacaga tggactgac aatcccctt 180
ctggtgggga tcaatcttgc accatcacag tgcacagaca totgatgcta ccagattttg 240
atttgtctga ggacattgaa agcacaactc aaccaggttc tcaacaggtc gacttcttgc 300
atgcactaat cgtgagcatg gatgtgattc aacatgaaac autaggaagc aagtttggag 360
aagagagctc ttgcaatatt cactgacctc aagcagcccg attcagcaaa agtcan 416
  
```

<210> 348
 <211> 351
 <212> DNA
 <213> Homo sapiens

```

<400> 348
gtacaggaga ggttgcagag tgcagagcag gcactgagct ctgcaggtga aagggctcgg 60
cagttggatg ctctcttga ggtcttgaat ttgaaacggg cagggagatg tctggcagtc 120
tctacagcag aagaaacggc aggcagtgcg cagggaagag caggagacag atgccttct 180
cttgtctcaa ctgcacagag gcgttctctc ctcttctact aatctctctc agcacagacc 240
cttctacggg gtcaggttgc gggacagtga ggtctttccc tcccaacag gccatctctc 300
aagctgtctc agtgggggga acccttggag aatcccggg cttctcttggg c 351
  
```

<210> 349
 <211> 207
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)...(207)
 <223> n = A,T,C or G

<400> 349

```

nccgggacat ctccaccctc aacagtggaa aqaagagcct uggagactgaa caaaaggcct 60
tqaccagtga gatttgcactg ctgcagctca ggctgaagac agagggcct gatctgtgcg 120
acagagtgcg cgaatgcag aagctggatg caccagtcaa ggaactggtg ctgaagtcgg 180
cgggtggaggc tgagcgcctg gtggctg

```

207

<210> 350

<211> 323

<212> DNA

<213> Homo sapiens

<400> 350

```

ccatacaggg ctgttgcctc ggnctcagag gtcatctctc gtacccctgat ccagaaactgt 60
ggggccagca ccaccctgtt acttaacctc ctccgggcca agcacaccca ggaagactgt 120
gagacctggg gtgtaaatgg tgagacgggt accttgggtg acatgaccca actgggcata 180
tgggagccat tggctgtgaa gctgcagact kataagacag cagtggagac ggcagttctg 240
ctactgcgaa ttgatgacat cgttctcagg caccgaaaag aaggcagatga ccagagccgg 300
caaggcgggg ctactgatgc tgg

```

323

<210> 351

<211> 353

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)... (353)

<223> n = A, T, C or G

<400> 351

```

cgcgcacatc cntggctcct tccantccct tttcttttct cngggaaagt gtatggggtt 60
tgtttttgtt ttgtagggtt ttttccctc tccactctc cctgtctctt ttgttccalg 120
ttgtccttct ctgtggggtt aggtttatg ttttaactat ctgaggttcc gtctatttcc 180
tcggactctg cctgcttggg ggggtttctc caccggttaa tatgttgcgt ccttttttct 240
ttttgtctgg aatctgagcc ttttccctc agcttcttcc ttttgaactt tgtcttctgg 300
ttctgaaacc atacttttac ctgagtttcc gtgagctga ggttgttgtg cca 353

```

<210> 352

<211> 467

<212> DNA

<213> Homo sapiens

<400> 352

```

ctgccacac tgatcaettg cgaagtgtcc ttagggttcc agaacaggaa ttgaagctc 60
aatttgagca gaacctgtct gagaaactct ctgaagcaga attacaaatt cgtcgtctca 120
gtcagagaca agttgscac tttactctgg atataatcc tgcclatccc agnctcagag 180
gaatcgaacc ggtctgtlcc agccatgcag ttgttgaaga ggaagccaga aaagccacc 240
aactctggtt ttcaagtggg gcatctaaat acagcatgaa gacctcatct gcagaaacac 300
ctactatccc gctgggtagt gcaattgagg ccatacaagg caactgttct gataatgagt 360
tcacccaagg tttaacccga gtatatccct caggttccct gacccgtggg gcttaccagt 420
aagsgaccct tggagccgtt ttctatgctg ttcanaaact ggcctaga

```

467

<210> 353

<211> 350

<212> DNA

<213> Homo sapiens

<400> 353

```

ctgctgcagc cacagtagtt cctcccatgg tgggtggccc tcttggctct gctggcccag 60
gaaatctgtc cccaccagga acagcccctg gaaaacggcc ccttctctta ccaccttqbt 120
gaaatgctgc acgggaactg cctcctggag gaccagtttt accttcccca gacalttgtc 180
ctgatttgtt agttttcttg gctgcattt caaaktgact caggaactgt khattgcatg 240
gagttacaa caggattctga ccatgaagtt ctcttttagg taacagahcc attaaccttt 300
ttgaagatgc ttcagatcca acaccaacaa gggcaaacct ctttgaactgg 350

```

<210> 354

<211> 351

<212> DNA

<213> Homo sapiens

<400> 354

```

atttagatga gatctgaggc atggagagct ggagacagta kcaaqactcc tagatttaag 60
tctttaggtt lllgcllllc kactcaccaa ttcttalcba caatgtatat tttagactcg 120
agcagatgct catcttcctc ttaagtcatt cctlllbgac gactatggca ggatlkayag 180
gaatggcagt atagatcaat gtctttttct gtaagtata ggaaaaacca gaggaggaaa 240
aaagagctga caattggag gtagtgaqaa actgacgala atttcttctt aacaaataat 300
agttctatat acaaggaggc tagtcaacca gatttctatt gttgagggcg a 351

```

<210> 355

<211> 300

<212> DNA

<213> Homo sapiens

<400> 355

```

ttttggcgca agttttacag attttattaa agtcgaagct attggtcttg gaaqmlgaaa 60
atgcaaatgt tgatggggtg gaattgaagc cagatacctt aalaaattha tatcttgggt 120
akaaatata qanattaagg gtaaacatca atgtgcccct gnaaaccgaa cagaagcagg 180
aacacgaaac caccacacaa aacatcgagg aagaaacgcaa actactgatt caggcgqcca 240
tcgtgagaat catgaagatg aggaagggtc tgnaacacca gcagttaccll qucggqqtcc 300
tcackcag 308

```

<210> 356

<211> 207

<212> DNA

<213> Homo sapiens

<400> 356

```

ctgtcccaag tgnlcccgq aggcaggatt ctgaagacca utccagqct atgttcannct 60
atgaagaaat ctqacccgcc aacgcagtc ctggyccllq cagtgcctcc tccccagct 120
ggtactttta cgtggagagg aactcctgca atcaacttcat ctatggaggg tgcgggggca 180
ataagaacag ctaccgctct gaggagg
207

```

<210> 357

<211> 188

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1)...(188)

<223> n = A,T,C or G

<400> 357

```

tcgaccacgc cctcgtagcg catgngctno aggaacatgc tcagagtgtt gaacaccccy 60
gtggggcccc cgcacagcct gngtgccac gtgataggcc calcctgtcc aaactgctcc 120
ttggtcttat gcacctgccc gatgaagtea atgaatccct cgcctgtctt gggcaccgcc 180
tgctctgg                                     188

```

<210> 358

<211> 291

<212> DNA

<213> Homo sapiens

<400> 358

```

ctgggagcct aggcacgcta ctgccttcaa atccgatchc ccgagtgcca caattttctgt 60
cccttttaag ggttcacacc actaaagatt tcacalqaaa gggttgtgat tttttgagc 120
aggcaggcgg taactgacag gggtgcatg caccggcggc cagagcgaac cagaacaggg 180
cagggaattt cacaatgttc ttctatacaa tngctggaat cctgaataa catcagtttc 240
taagttatgg gllgalllll aactactggg tttaggcagg gcaggccag g                                     291

```

<210> 359

<211> 117

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(117)

<223> n = A,T,C or G

<400> 359

```

gcacccacac tcacagcttg gaaalacagg aagactglnct ccaaaaaaaaa aaaaaaaaaa 60
ccccaaaaaa ctcacaaang taatgaatga taccacagaa gccttttcta gaaabag 117

```

<210> 360

<211> 394

<212> DNA

<213> Homo sapiens

<400> 360

```

ctgttctctt ggggttggtc agttttcagc tgggagaaag ggagtcaggc gcattgggaa 60
tcgtggttcc agtctggttg cagaattctg acatttgcac agaattttcc cclglttgya 120
aagtttgccc cagctttccc gggcacacca ccttttgctc caagtgtctn cgggtcagcc 180
aatctgcttg ccacacattg accaagccag acccggttca cccagctcga ggatcccagg 240
ttgaanagtg ggcctttgag gccclggaaa gaccaatcaa tggacttctt cccttgagag 300
tcagaggtca ccgtgattc tgatgcacac ttatcaktga totgcagtya lltctgcaaa 360
tcaagagaaa ctctgcaggg caatcccttg tttc                                     394

```

<210> 361

<211> 394

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature
 <222> (1)... (394)
 <223> n = A,T,C or G

<400> 361
 ctggggcggat agcacccgggc atattttntt natcgatgag gtctggccac ctgagcagtc 60
 cagcgaggac ttggtcttag ttgagcawtt tggctaggag gctagtatgc agcacggttc 120
 tgagtctgtg ggatagctgc catuagtaaa cctgaaggag gtgctggctg gtaagggttg 180
 attacaggtt tgggacacgc tegtacaatt gccattctct goataatactg gttagttagg 240
 tgagcctggc gctcttcttt ggctgagct aaagctacat acaslgactt tgtggacctc 300
 ggccgcgacc acgctaagcc gaattccgcg aactggcgg ccgttactag tggatccgag 360
 ctcggtaccg aucttggctt aatcatggtc atag 394

<210> 362
 <211> 268
 <212> DNA
 <213> Homo sapiens

<400> 362
 ctgcgcgtgg accagtcagc ttccgggtgt gactggagca ggccctgtcg tcttcttcag 60
 agtcactttg cagggggttg tgaagctgct cccatccatg tacagctccc agtctactcg 120
 tggttcagga tggctctggg ggtttaggca actagaataa actgagtcac ctactctac 180
 acagttatgt ctaactgggc tctctgacac cgggaggaggt gtgctgggtt ttaggtgttg 240
 caaacttcaa tggttatgcg gggatgtt 268

<210> 363
 <211> 323
 <212> DNA
 <213> Homo sapiens

<400> 363
 ccttgaactt ttcagcaagt gttgaggtgt aatccgtctc cacagacaag gttcaggactc 60
 gtttgcaccc gttgatgata gaatggggtt ctgctgcacg agtctgggtg cctatctgca 120
 gacagacact ggcaacattg cggacacctt ccaggagggc agaatgcaga gtttccctctg 180
 tgaataccag caatttcagg ttgtagagtg tgcctattgt gaacacctgc tggatgacca 240
 gcccaagag gttgggggag atgttgagca tgttcagcag cgtgggcttcg ctggtctccc 300
 ctttgtctcc agtcttgatc aga 323

<210> 364
 <211> 393
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)... (393)
 <223> n = A,T,C or G

<400> 364
 ccaagctctc catcgtcccc gtgcgcagng gctactgggg gacacagatc ggcaagcccc 60
 acactgtccc ttgcagggtg acaggccgct ggggtctctt gctggtaagc ctcatcactg 120
 caccacgggg cactggcact gtctccggac ctgtgcctaa gaagctgtct ctgctgctg 180
 gcatcgatgg ctgctacacc ttagcccggg gctgcactgc caacctgggc aacttcgcca 240
 aggcacacct tgtgtgcatt tctaagacct acagctacct gaccccccgc ctctggaggg 300
 agactgtatt caccaggtct cctatcagg agtttaactg ccaactctgt aagacccaca 360

ccagagtcctc cgtgacagcgg actcaggctc cag

393

<210> 365

<211> 371

<212> DNA

<213> Homo sapiens

<400> 365

```

cctctctcaga ggggtagctg ttcttattgc tccggcagcc tccctatgat aagttattgc 60
aggagttcct ctccacgtca aagtaccagg gtgggaagga tgcacggcaa ggcccagtga 120
ctgctgttggc ggtgcagtat tcttctatgt tgaacatctc gctggagtgg tcttcagaat 180
cctgccttct gggagcactt gggacagagg aatccctctc attcctgctg gtggacctcg 240
gccggagacca cgttaagcgg aattccagca cactggcggc cgttctatgt ggatccagac 300
tcgggtaccac gcttggcgtc aactcggctc tagctgttct ctgtgtgaaa ttgttctccg 360
ctcacaattc c

```

371

<210> 366

<211> 393

<212> DNA

<213> Homo sapiens

<400> 366

```

atttcttgcg agatgggagg tctttgggtg aaactccttt cgggaaaagc tttttggctt 60
cttcttcagg gatggttggg gggacacatc cactatcccc alcttccaa tcaactgggg 120
tggaaccctt tttttctgct gtcagctgga gagagcttgc taccctgaga atctcatcaa 180
agtctctgce agtggtagct gggtagagga taagcagctt cagcttctca tcaggaccaa 240
aacctaacac caccagagct gccacagggc tgccttttcc atcttctctc gctggatcca 300
gcctgcccac caggatggca agctcccgat tcttatccac gatgatggga aaaggtaaat 360
ttctgttggg ctcttcacaa ttgtaagcat tga

```

393

<210> 367

<211> 327

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)... (327)

<223> n = A, T, C or G

<400> 367

```

ccagctctgt ctctctcttg actctaaagt cttnagcagc aagacgggga ttggnagctt 60
gacgaacgat gctggcattg tccacagtat ttgcgaagat ctgagccttc aggtcctcga 120
tgatcttgaa gtaatggctc cagtctctga cctggggctc cttctctctc aagtctctcc 180
ggattttgct ctccagcttc cggttctctg tctccaggtt cctcactctg tccaggtaag 240
aggccaggcg gtcgttcagg ctttgcctgg tctccttctc gttctggatg cttccctctc 300
ctgctagacc cctggctctc cgggtagg

```

327

<210> 368

<211> 306

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> {1}...{306}

<223> n = A, T, C or G

<400> 368

```

ctggagaggg aatlcagcag tttnaagaag tactgcccag tcatergtgt cattgcccac 60
ccccagatgc gacctgttcc tctgcgccag aagagggccc acctgatgga gatccaggtg 120
aacggaggca ctgtggccga gaagctggac tgggcccgcg agagccttga gcagcaggtg 180
cctgtgaacc aagtgttttg gcaggatgag atgatogacg lcatcggggg gacaaagggc 240
aaaggctacc aagggytcac cagkctttg cacaaccaag agctgccccg caagacccac 300
cgagga                                           306

```

<210> 369

<211> 394

<212> DNA

<213> Homo sapiens

<400> 369

```

tcgagccccc caggaaacac gagagctggg ccagcatttg cacttgatag gatttcccgc 60
cggtgtccac gacagtgcgt lcatlctgtt tctggggttg gaacctgat tccacagac 120
ccttgaasta cactgogttg acgaggacca gtctggtagg caccaccatc ataagalcly 180
gggacagcag attgtcaatc atatcccttg tllcattttt aaccatgca tlyatggagt 240
caacggcagc ggttggalcc tcaaaqllca cattoaggac ctacacclgg accacatctt 300
tgttctttgt aacaaaaggc acttcaattt cagaggcatt cttaaccaac acggcggttag 360
ccactgtcac aatgtcttta ttctcttttg agac                                           394

```

<210> 370

<211> 653

<212> DNA

<213> Homo sapiens

<400> 370

```

ccaccacacc caattcttly ctggtatcat ggcugccgcc acgtgccagc attaccggct 60
acatcatcaa gtatgagcag tctgggkctt ctcccagaga agtggtcccl cygcctcgcc 120
ctggtgtcac agaggctact attactggcc tggaaaccggg aaccggatat accatttatg 180
lcatlctgctt gaagaataat cagaagagcg agccclqut tggagggaaa aagacagacg 240
agcttccccc actggtaccc ctccacaccc caattcttca tggaccagag atcttggatg 300
ttctttccac agttccaaaq mmmcllly tccccaccc tgggtalqm actggaaaly 360
gtattcagct tcttggcaat tctgtcagc aaccacagtl tgggcaacan atgatctttg 420
aggaaacalg ttttaggcgg accacacccc ccacacccc caccocata aggcataggc 480
caagaccata cccgctggal gtaggacaag aaqctctccc tcagacaacc atctcatggg 540
ccccattcca ggacattctt ggglaacatn tttoatgtca tctgllggc actgaktgag 600
aaccottaca gtccagggtt cctggaaatt ctaccagtgc caetctgaca gga                                           653

```

<210> 371

<211> 268

<212> DNA

<213> Homo sapiens

<400> 371

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ctcttcttgc cacttttttg ccccaaatg caccclggag ggcaccaaga agggccacaa 120
gcttcttctg gactacatcg ggccttgcaa atactctccc ccttgcctgg actctgagct 180
gacccaattc cccctggcga tgggggactg uctcaagaac gtccctggtc ccttktatga 240
gagggatgag gacaacaacc ttctgact

```

268

<210> 372
 <211> 392
 <212> DNA
 <213> Homo sapiens

<400> 372
 gctggtgccc ctggtgaacg tggacclctt ggattggcag gggcccagc attagaggt 60
 ggaactggtc cccctggtec ggaaggagga aagggtgctg ctggtccctc tgggccaccl 120
 ggtgctgctg gtaactcttg tctgcaagga atgctctggg aagaggaggt tcttggaggt 180
 cctgggtccaa aggggtgaca ggggtgaacca ggcggtccag gtgctgatgg tglcccaggg 240
 aaagatggcc caagggttcc tactggtcct attggtcttc ctggcccagc tggccagcct 300
 ggagataagg gtagagggtg tccccccgga ctctcaggta tagctggacc tctgtgttag 360
 cctggtgaga gagggtgaac ctggcccgag ac 392

<210> 373
 <211> 388
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)... (388)
 <223> n = A,T,C or G

<400> 373
 ccaagcgctc agatcggcaa ggggcaccan ttltggtctg cccagtgcac agccctctct 60
 ccaggtcagc gatgaaggta tcttcagttc ccccgaacg atgagctccc atgacgcccc 120
 aacatctggc ctgggcccgc ttgcacgctt gaagagactc ggtcagggag ccaatctggt 180
 tgaatttgag caggaggcag ttgcaggact tctcgtctcc ggccttggcg atctctttg 240
 ggttggtcac tctgagatca tccccacta ccttgattcc tgcactggcl gtagcctctt 300
 gccaaagctc ccagtcacac tggcctcagg gatcttcgat agacctact gggtagtctt 360
 tgaatgagga ctctgacagg tccgcccag 388

<210> 374
 <211> 393
 <212> DNA
 <213> Homo sapiens

<400> 374
 ctgacgacag cglgacccc tgcctctggg gtgtcctctt ctctcatgag aactctaac 60
 aggaaggcga tcatgggggt cctttccccc aagttatccc atccaagggc ggtgttctgg 120
 gcataaaggt agacaagggc gtgggtccccc tggcagggac aaatggcgag acctacacac 180
 aagggttggc tgggtctgcl gagcgcctgt cccagtacaa gaaggcanga gctgactctg 240
 ccaagctggc tctgtgtgct aagattgggg aacacacccc ctgagccctc gccatcatgg 300
 acaatgccan tgttctggcc cgttatgcca gtatctgccc gcagaatggc attgtgcccc 360
 tctgtgagcc tgagatcttc cctgatgggg acc 393

<210> 375
 <211> 394
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)... (394)

<223> n - A,T,C or G

<400> 375

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ccacaaatgg cgtggtccat gtcctaacnn tttttctgca gctccagcc aacagacctc 60
aggaaagagg gcatgaactl ucagactctg cgtttgagat ctccaacaa gcatcagcgt 120
tttcnagggc ttcccagagg tctgtgcgac tagccctgtt ctatcaaan ttattagaga 180
ngatgungca ttagcttgaa gcactacagg aggaatgcac cagggcagct ctccgcgat 240
ttctctcaga ttccacaga gactgtttga atgttttcaa aacaaagtat cacactttan 300
tgtacatggg ccgacacala atgagatgtg agccttgtgc atgtggggga ggaggagag 360
ngatgtacatt tttaaatcat gtcccccll aaca 394
```

<210> 376

<211> 392

<212> DNA

<213> Homo sapiens

<220>

<221> misc. feature

<222> (1)...(392)

<223> n - A,T,C or G

<400> 376

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ctgccagcc cccattggcg agtttgakln ggtgtgcagc atgacaaca agacnllnq 60
ctclccclgn ccccllnkklk ccacaaagtg cactcttgag gccaccaagc agggccncaa 120
gctccacctg gactaacctg ggccttgcaa ctuacatccc ccllqccctg acctgtagct 180
gacgaattc cccctgcgca tgcgggacclg gctcaagaa ntccgtgtca cctcttatga 240
gagggalga gacaaacac lcttactga gaagcagag ctgcgggtga ayaagatnq 300
tgaantgg aggcactgg aggcaggaga ccccccctg gagclgntq cccgggactt 360
cgagaagaa cctaacatgt acatctccc kq 392
```

<210> 377

<211> 292

<212> DNA

<213> Homo sapiens

<400> 377

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cantgtttga tgottaaccc ccccaatttc lgtagatgg alggccagtg cangcgtgac 60
ttgaagtgtt gcatgggcac gcttgggaa toctggtll cccctgtgaa agcttgatc 120
ctgccalata gagyaggttc tggatctcgt ctctglntg tccaggtct llnacccclg 180
agacttqut ccaccactga tatctcctt tggggaaggg cttygcacn agcaggctt 240
caagaagtgc cagtgtatca atgaataal aacagagcct alllctcttt gc 292
```

<210> 378

<211> 395

<212> DNA

<213> Homo sapiens

<400> 378

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ctgtctcttc agcgaagggt ttctggcala tccaatgata aggcctgcac agactgttcc 60
aataccagca ccagaaccag ccaactctac tgttgacag cctgcaccaa taattttggc 120
agcaglalca atgtctctgt lgtttgcact ggtctgaaa tccctttgga ttagctlgaga 180
caccacattc tgggcctgq ttttctaaag alagacctcc aactctllgc cctctagrac 240
atagccatct gctcggccac actgtcccg ccttgaagcg atgcaacaa gaagcttgc 300
ctgtctggaac tgcctctcca ggagaatgt tttttggca ttctltttcc tttctctc 360
tttctctctga attttttaga tctttllttg tttaa 395
```

<210> 379
 <211> 223
 <212> DNA
 <213> Homo sapiens

<400> 379
 ccagatgaaa lqatgcgca atggctgtgg gaaggtgtcc tgtgtcactc ccaactttctg 60
 agctccagcc accaccaggc tgagcagtga ggagagaaag tttctgactg gccctgcactc 120
 tggttccagc ccacttgcac tacccttttt cgggactctg taltccctct tgggtctgacc 180
 acagcttctc cctttcccaa ccaataaagc accactttc agc 223

<210> 380
 <211> 317
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)...(317)
 <223> n = A, T, C or G

<400> 380
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 gggctgcagga gaacaaagga gacaaatnag gcagaatala tctcggggat atagaccacg 120
 attccgcagg ggcctctctc gccaaagaca gcttagaagc gacggcaatg aagaaactaa 180
 agaaaatcaa ggagatgaga cccaagggtc gtagccacct caactctggc accgtccgca 240
 ctccaattac cgcgcgcagc gcccaagaaa ccttaacca caagatggca aagngacaaa 300
 agcagatgag ttagcccg 317

<210> 381
 <211> 392
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> [1]...[392]
 <223> n = A, T, C or G

<400> 381
 cctgaaggaa gagctggcct acctgaatnn nacccttgag gaggaaatca gtaacqtnag 60
 gggccaagtg ggaggtcagg tcagtgagga ggtggattcc gttccgggca ccgatctcgc 120
 caagatccctg vgtgacatgc gaagccaata tgaggtcactg gccgagcaga accggaagga 180
 tgetgaagcc tggttcacca gccggactga agaatgnaa cgggaggtcg ctggccacaa 240
 ggagcagctc cagatyagca ggtccgaggt tactgaacct cggcgcaacc ttccaggtct 300
 tgagattgag ctgcaglnac agactctggc nccgaccacg ctatgcagaa ttccagcaca 360
 ctggcggccg ttaactatgq alnnnagctc gg 392

<210> 382
 <211> 234
 <212> DNA
 <213> Homo sapiens

<400> 382

```

cttgcgagtc taaatgagcg tggtaaagg tgggtgcctgc tgggggtctcg tagataccac 60
gggacttcat tccaatgaag cggkltctca cgaatgcaat acggccccac ccatgccttc 120
ccgcgacttc gttraggkac atgaagagct ccaaggaggt ctggtgggtg gtgcacatct 180
tgaactkgtt caacttcaca gggacccctt ttctgaactc catctccaga atgt      234

```

<210> 383
 <211> 396
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)... (396)
 <223> n = A, T, C or G

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<400> 383
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gtttgnaccc gttgatgata gaattgggglc ctgatgcacc agttgggtag ccactctgca 120
gacagacact ggcacacatg cgggaccccc ggatttcant ggtgccccct gacatttttag 180
tgggtgatacc taaagcctgg aaaaaggaggt tctctctggg cccgagacac gtgtctctgg 240
ctggcacagt gacttcacat ggggcaatgg taccagcacc ggcagcagac ctgccccggc 300
ggccgctctg aagccagall ccagacacact ggccgccttc actagtggat ccgagctcgg 360
taaccaagctt ggcgtaatac tggctcatag tgttttc      396

```

<210> 384
 <211> 396
 <212> DNA
 <213> Homo sapiens

```

<400> 384
gotgaatagg caccagaggc acctgtacac ctccagacca gtctgcaacc tcaggctcag 60
tagcagtga ctcaggagcg ggagcagtc aatraccccg aaattccctc laggtracctg 120
ccttctcagc agcagcctgc tcttcttttt cactctcttc aggalchctg taqaantaca 180
gatcaggccl gacttcacat ggggtgllmc gggaaatggl ggcacgcacg ccagaaactt 240
cccgagccac catcacctac atccaccccc ctgagtgagg tcccttggtg ttgcctggga 300
tggcaatgtc cacatagcgc agaggagaat ctgtgttaca cagcgcaatg qlagglaaggl 360
taacataaga tgcctccgtg agaggtcgtt gttcag      396

```

<210> 385
 <211> 2943
 <212> DNA
 <213> Homo sapiens

```

<400> 385
cagcaccagg agtggatgct atctgcacac accgcccctg cccacacagg cctgggctgg 60
acagagagca gctgtatttg gactgtagcc agctgaccca cagcatcant gagcaggccc 120
cctacaccct ggacagggac agtctctatg tcaatggttt cacacagcag agctctgtgc 180
ccaccactag cacttctggg accccacacg tggacctggg aaactctggg actccagttt 240
ctaacacctg tccctcggcl gacagccctc tctgggllgl attcactctc aacttcacca 300
tcaccaacct ggggtatgag ggggacatgc agaacctgg ctccaggagc ttcacaccca 360
cggagagggc ccttcagggc ctggtccctg ltcagagaca ccagtgttg cctctcttac 420
tctggtgca gactgacttt gctcaggccl gaaaaggatg ggcacgccac tggagttgat 480
gccatctgca cccaccacc tgaacccaaa agccctagge tggcagaga gcagctgtat 540
tgggagctga gccagctgac ccacaatat actgagctgg gccctatgc cctggacaac 600
gacagcctct ttgtcwatgg ttccactcat cggagctctg tglncaccac cagcactcct 660

```

```

gggacccccca cagtgtatct ggggncatct aagacLccag cctcgatatt kggcccttca 720
gctgccagcc atctcctgat actatctacc ctcaacttca ccatcactaa cctgcggtat 780
gggggagaca kglggccclgg ctccagggaag tLaaacta cagagagggc ccttcagggc 840
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nrttgccnac tnatctcct cctgtLggg ccggggclgg acatacagca gchttctg 1860
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aaa 2943

```

<210> 386

<211> 2608

<212> DNA

<213> Homo sapiens

<400> 386

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tgaaaaggat gggacagcca ctggagLggg tgcctctgc nccaccacc ctgaccccaa 120
aagccctagg ctggacngag agnagctgt tggggagctL ngccagctga cccacaatal 180
cactgagctg ggcctctat ccttgacaa cgaacgctc tttgtcaatg gtttcacL 240
tcnngctct gtgtccaca ccagcactc tnggacccc acagtghatc tggngcctc 300
taagactcca gcctcgatat ttggccctL ngtgcagc catctctga tactattcac 360
cctcaactc acctcacta acctgcgga tggaggagac atgtgacct gctccaggaa 420
gttcaacct acagngaggg tcttcaagg cctgtcaag ccltgttca agacaccag 480
tgtLgnact ctctactcty gctgcngct gacctgtct aggcagag nngatgggga 540

```

```

agccacogga gtggatgcca tetgcaccca cccgactgac ccccaaggcc ctgggctgga 600
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ctacacaclyg gacaggggca gtctctatgl cactgggttc accatcgga gctctgtacc 720
caccaccagc accggggttg tcagcgqgga gccattcacg ctgaactlcn ccataacaa 780
cotgcgctac atggcgagca lgggccaacc cggclccctc aagtlunaca tccagacaa 840
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<210> 387

<211> 1761

<212> DNA

<213> Homo sapiens

<400> 387

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ctgaacttca ccatcaacaa nclgaggtac atggcgagca tgggccaac cggctcctc 60
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agcctgggtg cccggtacac aggtgcagg gtcctgcacc taaggtctgt gaagagcgt 180
gctgaggggt ggttggaact cctctgcagg lagggtcaga ggggtccac ggcataccc 240
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gctctctatg cctggaggg gclaggtctt cactcactg ctatgcacc cagcatttat 720
caatcctggg caggtaccag cctcatttcc cactgctcag ctggacccc agtaatccag 780

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```

accccacatc ctcagagtac atcaccctgc tgggggacat ccaggacaag gtcaccacac 840
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tggactccgt gttggtcact gtcanggcct tgttctcttc caatttggac cccagccttg 960
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tcctcggett ggcaggactc clgggactca tccatgctt gctctgggt gtctgtgga 1560
ccaccggccg gctgagagag gaaggagaa acaacgtcaa gcaacagtgc ccaggctact 1620
accagtcaca cctagacctg gaggaactgc aatgacttga acttgccgt gctgggggtg 1680
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1761

<210> 388

<211> 772

<212> PRT

<213> Homo sapiens

<400> 388

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Met Ser Met Val Ser His Ser Gly Ala Leu Cys Pro Pro Leu Ala Phe
      5                                10                                15

Leu Gly Pro Pro Gln Trp Thr Trp Glu His Leu Gly Leu Gln Phe Leu
      20                                25                                30

Asn Leu Val Pro Arg Leu Pro Ala Leu Ser Trp Cys Tyr Ser Leu Ser
      35                                40                                45

Thr Ser Pro Ser Pro Thr Cys Gly Met Arg Arg Thr Cys Ser Thr Leu
      50                                55                                60

Ala Pro Gly Ser Ser Thr Pro Arg Arg Gly Ser Phe Arg Ala Trp Ser
      65                                70                                75                                80

Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu
      85                                90                                95

Thr Leu Leu Arg Pro Glu Lys Asp Gly Thr Ala Thr Gly Val Asp Ala
     100                                105                                110

Ile Cys Thr His His Pro Asp Pro Lys Ser Pro Arg Leu Asp Arg Glu
     115                                120                                125

Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr His Asn Ile Thr Glu Leu
     130                                135                                140

Gly Pro Tyr Ala Leu Asp Asn Asp Ser Leu Phe Val Asn Gly Phe Thr
     145                                150                                155                                160

His Arg Ser Ser Val Ser Thr Thr Ser Thr Pro Gly Thr Pro Thr Val

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165					170					175					
Tyr	Leu	Gly	Ala	Ser	Lys	Thr	Pro	Ala	Ser	Ile	Phe	Gly	Pro	Ser	Ala
			180					185					190		
Ala	Ser	His	Leu	Leu	Ile	Leu	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn
		195					200					205			
Leu	Arg	Tyr	Glu	Glu	Asn	Met	Trp	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr
		210					215					220			
Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Arg	Pro	Leu	Phe	Lys	Asn	Thr
		225					230					235			240
Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro
			245					250						255	
Glu	Lys	Asp	Gly	Glu	Ala	Thr	Gly	Val	Asp	Ala	Ile	Cys	Thr	His	Arg
		260						265					270		
Pro	Asp	Pro	Thr	Gly	Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu	Tyr	Leu	Gln
		275					280					285			
Leu	Ser	Gln	Leu	Thr	His	Ser	Ile	Thr	Glu	Leu	Gly	Pro	Tyr	Thr	Leu
		290					295					300			
Asp	Arg	Asp	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Ser	Ser	Val
		305					310					315			320
Pro	Thr	Thr	Ser	Thr	Gly	Val	Val	Ser	Gln	Glu	Pro	Phe	Thr	Leu	Asn
			325					330						335	
Phe	Thr	Ile	Asn	Asn	Leu	Arg	Tyr	Met	Ala	Asp	Met	Gly	Gln	Pro	Gly
		340						345					350		
Ser	Leu	Lys	Phe	Asn	Ile	Thr	Asp	Asn	Val	Met	Lys	His	Leu	Leu	Ser
		355					360					365			
Pro	Leu	Phe	Gln	Arg	Ser	Ser	Leu	Gly	Ala	Arg	Tyr	Thr	Gly	Cys	Arg
		370					375					380			
Val	Ile	Ala	Leu	Arg	Ser	Val	Lys	Asn	Gly	Ala	Gln	Thr	Arg	Val	Asp
		385					390					395			400
Leu	Leu	Cys	Thr	Tyr	Leu	Gln	Pro	Leu	Ser	Gly	Pro	Gly	Leu	Pro	Ile
			405					410						415	
Lys	Gln	Val	Phe	His	Gln	Leu	Ser	Gln	Gln	Thr	His	Gly	Ile	Thr	Arg
		420						425					430		
Leu	Gly	Pro	Tyr	Ser	Leu	Asp	Lys	Asp	Ser	Leu	Tyr	Leu	Asn	Gly	Tyr
		435					440					445			
Asn	Glu	Pro	Gly	Pro	Asp	Glu	Pro	Pro	Thr	Thr	Pro	Lys	Pro	Ala	Thr
		450					455					460			

Thr Phe Leu Pro Pro Leu Ser Glu Ala Thr Thr Ala Met Gly Tyr His
 465 470 475 480
 Leu Lys Thr Leu Thr Leu Asn Phe Thr Ile Ser Asn Leu Gln Tyr Ser
 485 490 495
 Pro Asp Met Gly Lys Gly Ser Ala Thr Phe Asn Ser Thr Glu Gly Val
 500 505 510
 Leu Gln His Leu Leu Arg Pro Leu Phe Gln Lys Ser Ser Met Gly Pro
 515 520 525
 Phe Tyr Leu Gly Cys Gln Leu Ile Ser Leu Arg Pro Glu Lys Asp Gly
 530 535 540
 Ala Ala Thr Gly Val Asp Thr Thr Cys Thr Tyr His Pro Asp Pro Val
 545 550 555 560
 Gly Pro Gly Leu Asp Ile Gln Gln Leu Tyr Trp Glu Leu Ser Gln Leu
 565 570 575
 Thr His Gly Val Thr Gln Leu Gly Phe Tyr Val Leu Asp Arg Asp Ser
 580 585 590
 Leu Phe Ile Asn Gly Tyr Ala Pro Gln Asn Leu Ser Ile Arg Gly Gln
 595 600 605
 Tyr Gln Ile Asn Phe His Ile Val Asn Trp Asn Leu Ser Asn Pro Asp
 610 615 620
 Pro Thr Ser Ser Glu Tyr Ile Thr Leu Leu Arg Asp Ile Gln Asp Lys
 625 630 635 640
 Val Thr Thr Leu Tyr Lys Gly Ser Gln Leu His Asp Thr Phe Arg Phe
 645 650 655
 Cys Leu Val Thr Asn Leu Thr Met Asp Ser Val Leu Val Thr Val Lys
 660 665 670
 Ala Leu Phe Ser Ser Asn Leu Asp Pro Ser Leu Val Glu Gln Val Phe
 675 680 685
 Leu Asp Lys Thr Leu Asn Ala Ser Phe His Trp Leu Gly Ser Thr Tyr
 690 695 700
 Gln Leu Val Asp Ile His Val Thr Gln Met Glu Ser Ser Val Tyr Gln
 705 710 715 720
 Pro Thr Ser Ser Ser Ser Thr Gln His Phe Tyr Leu Asn Phe Thr Ile
 725 730 735
 Thr Asn Leu Pro Tyr Ser Gln Asp Lys Ala Gln Pro Gly Thr Thr Asn
 740 745 750

Tyr Gln Arg Asn Lys Arg Asn Ile Glu Asp Ala Ala Pro His Arg Gly
 755 760 765

Gly Leu Pro Val
 770

<210> 389

<211> 833

<212> PRT

<213> Homo sapiens

<400> 389

Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr
 5 10 15

Leu Leu Arg Pro Glu Lys Asp Gly Thr Ala Thr Gly Val Asp Ala Ile
 20 25 30

Cys Thr His His Pro Asp Pro Lys Ser Pro Arg Leu Asp Arg Glu Gln
 35 40 45

Leu Tyr Trp Glu Leu Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly
 50 55 60

Pro Tyr Ala Leu Asp Asn Asp Ser Leu Phe Val Asn Gly Phe Thr His
 65 70 75 80

Arg Ser Ser Val Ser Thr Thr Ser Thr Pro Gly Thr Pro Thr Val Tyr
 85 90 95

Leu Gly Ala Ser Lys Thr Pro Ala Ser Ile Phe Gly Pro Ser Ala Ala
 100 105 110

Ser His Leu Leu Ile Leu Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu
 115 120 125

Arg Tyr Glu Glu Asn Met Trp Pro Gly Ser Arg Lys Phe Asn Thr Thr
 130 135 140

Glu Arg Val Leu Gln Gly Leu Leu Arg Pro Leu Phe Lys Asn Thr Ser
 145 150 155 160

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu
 165 170 175

Lys Asp Gly Glu Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg Pro
 180 185 190

Asp Pro Thr Gly Pro Gly Leu Asp Arg Gln Gln Leu Tyr Leu Glu Leu
 195 200 205

Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp
 210 215 220

Arg Asp Ser L u Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Pro
 225 230 235 240
 Thr Thr Ser Thr Gly Val Val Ser Glu Glu Pro Phe Thr Leu Asn Phe
 245 250 255
 Thr Ile Asn Asn Leu Arg Tyr Met Ala Asp Met Gly Gln Pro Gly Ser
 260 265 270
 Leu Lys Phe Asn Ile Thr Asp Asn Val Met Lys His Leu Leu Ser Pro
 275 280 285
 Leu Phe Gln Arg Ser Ser Leu Gly Ala Arg Tyr Thr Gly Cys Arg Val
 290 295 300
 Ile Ala Leu Arg Ser Val Lys Asn Gly Ala Glu Thr Arg Val Asp Leu
 305 310 315 320
 Leu Cys Thr Tyr Leu Gln Pro Leu Ser Gly Pro Gly Leu Pro Ile Lys
 325 330 335
 Gln Val Phe His Glu Leu Ser Gln Gln Thr His Gly Ile Thr Arg Leu
 340 345 350
 Gly Pro Tyr Ser Leu Asp Lys Asp Ser Leu Tyr Leu Asn Gly Tyr Asn
 355 360 365
 Glu Pro Gly Pro Asp Glu Pro Pro Thr Thr Pro Lys Pro Ala Thr Thr
 370 375 380
 Phe Leu Pro Pro Leu Ser Glu Ala Thr Thr Ala Met Gly Tyr His Leu
 385 390 395 400
 Lys Thr Leu Thr Leu Asn Phe Thr Ile Ser Asn Leu Gln Tyr Ser Pro
 405 410 415
 Asp Met Gly Lys Gly Ser Ala Thr Phe Asn Ser Thr Glu Gly Val Leu
 420 425 430
 Gln His Leu Leu Arg Pro Leu Phe Gln Lys Ser Ser Met Gly Pro Phe
 435 440 445
 Tyr Leu Gly Cys Gln Leu Ile Ser Leu Arg Pro Glu Lys Asp Gly Ala
 450 455 460
 Ala Thr Gly Val Asp Thr Thr Cys Thr Tyr His Pro Asp Pro Val Gly
 465 470 475 480
 Pro Gly Leu Asp Ile Gln Gln Leu Tyr Tyr Glu Leu Ser Gln Leu Thr
 485 490 495
 His Gly Val Thr Gln Leu Gly Phe Tyr Val Leu Asp Arg Asp Ser Leu
 500 505 510
 Phe Ile Asn Gly Tyr Ala Pro Gln Asn Leu Ser Ile Arg Gly Glu Tyr

515	520	525
Gln Ile Asn Phe His Ile Val	Asn Trp Asn Leu	Ser Asn Pro Asp Pro
530	535	540
Thr Ser Ser Glu Tyr Ile Thr	Leu Leu Arg Asp Ile	Gln Asp Lys Val
545	550	555
Thr Thr Leu Tyr Lys Gly Ser	Gln Leu His Asp Thr	Phe Arg Phe Cys
	565	570
Leu Val Thr Asn Leu Thr Met	Asp Ser Val Leu Val	Thr Val Lys Ala
	580	585
Leu Phe Ser Ser Asn Leu Asp	Pro Ser Leu Val Glu	Gln Val Phe Leu
	595	600
Asp Lys Thr Leu Asn Ala Ser	Phe His Trp Leu Gly	Ser Thr Tyr Gln
	610	615
Leu Val Asp Ile His Val Thr	Glu Met Glu Ser Ser	Val Tyr Gln Pro
	625	630
Thr Ser Ser Ser Ser Thr	Gln His Phe Tyr Leu	Asn Phe Thr Ile Thr
	645	650
Asn Leu Pro Tyr Ser Gln	Asp Lys Ala Gln Pro	Gly Thr Thr Asn Tyr
	660	665
Gln Arg Asn Lys Arg Asn	Ile Glu Asp Ala Leu	Asn Gln Leu Phe Arg
	675	680
Asn Ser Ser Ile Lys Ser	Tyr Phe Ser Asp Cys	Gln Val Ser Thr Phe
	695	700
Arg Ser Val Pro Asn Arg	His His Thr Gly Val	Asp Ser Leu Cys Asn
	705	710
Phe Ser Pro Leu Ala Arg	Arg Val Asp Arg Val	Ala Ile Tyr Gln Gln
	725	730
Phe Leu Arg Met Thr	Arg Asn Gly Thr Gln	Leu Gln Asn Phe Thr Leu
	740	745
Asp Arg Ser Ser Val Leu	Val Asp Gly Tyr Phe	Pro Asn Arg Asn Glu
	755	760
Pro Leu Thr Gly Asn Ser	Asp Leu Pro Phe Trp	Ala Val Ile Leu Ile
	770	775
Gly Leu Ala Gly Leu Leu	Gly Leu Ile Thr Cys	Leu Ile Cys Gly Val
	785	790
Leu Val Thr Thr Arg	Arg Arg Lys Lys Glu	Gly Glu Tyr Asn Val Gln
	805	810

Gln Gln Cys Pro Gly Tyr Tyr Gln Ser His Leu Asp Leu Glu Asp Leu
820 825 830

Gln

<210> 390

<211> 438

<212> PRT

<213> Homo sapiens

<400> 390

Met Gly Tyr His Leu Lys Thr Leu Thr Leu Asn Phe Thr Ile Ser Asn
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Leu Gln Tyr Ser Pro Asp Met Gly Lys Gly Ser Ala Thr Phe Asn Ser
20 25 30

Thr Glu Gly Val Leu Gln His Leu Leu Arg Pro Leu Phe Gln Lys Ser
35 40 45

Ser Met Gly Pro Phe Tyr Leu Gly Cys Gln Leu Ile Ser Leu Arg Pro
50 55 60

Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Thr Thr Cys Thr Tyr His
65 70 75 80

Pro Asp Pro Val Gly Pro Gly Leu Asp Ile Gln Gln Leu Tyr Trp Glu
85 90 95

Leu Ser Gln Leu Thr His Gly Val Thr Gln Leu Gly Phe Tyr Val Leu
100 105 110

Asp Arg Asp Ser Leu Phe Ile Asn Gly Tyr Ala Pro Gln Asn Leu Ser
115 120 125

Ile Arg Gly Glu Tyr Gln Ile Asn Phe His Ile Val Asn Trp Asn Leu
130 135 140

Ser Asn Pro Asp Pro Thr Ser Ser Glu Tyr Ile Thr Leu Leu Arg Asp
145 150 155 160

Ile Gln Asp Lys Val Thr Thr Leu Tyr Lys Gly Ser Gln Leu His Asp
165 170 175

Thr Phe Arg Phe Cys Leu Val Thr Asn Leu Thr Met Asp Ser Val Leu
180 185 190

Val Thr Val Lys Ala Leu Phe Ser Ser Asn Leu Asp Pro Ser Leu Val
195 200 205

Glu Gln Val Phe Leu Asp Lys Thr Leu Asn Ala Ser Phe His Trp Leu
210 215 220

Gly Ser Thr Tyr Gln Leu Val Asp Ile His Val Thr Glu Met Glu Ser
 225 230 235 240
 Ser Val Tyr Gln Pro Thr Ser Ser Ser Thr Gln His Phe Tyr Leu
 245 250 255
 Asn Phe Thr Ile Thr Asn Leu Pro Tyr Ser Gln Asp Lys Ala Gln Pro
 260 265 270
 Gly Thr Thr Asn Tyr Gln Arg Asn Lys Arg Asn Ile Glu Asp Ala Leu
 275 280 285
 Asn Gln Leu Phe Arg Asn Ser Ser Ile Lys Ser Tyr Phe Ser Asp Cys
 290 295 300
 Glu Val Ser Thr Phe Arg Ser Val Pro Asn Arg His His Thr Gly Val
 305 310 315 320
 Asp Ser Leu Cys Asn Phe Ser Pro Leu Ala Arg Arg Val Asp Arg Val
 325 330 335
 Ala Ile Tyr Glu Gln Phe Leu Arg Met Thr Arg Asn Gly Thr Gln Leu
 340 345 350
 Gln Asn Phe Thr Leu Asp Arg Ser Ser Val Leu Val Asp Gly Tyr Phe
 355 360 365
 Pro Asn Arg Asn Glu Pro Leu Thr Gly Asn Ser Asp Leu Pro Phe Trp
 370 375 380
 Ala Val Ile Leu Ile Gly Leu Ala Gly Leu Leu Gly Leu Ile Thr Cys
 385 390 395 400
 Leu Ile Cys Gly Val Leu Val Thr Thr Arg Arg Arg Lys Lys Glu Gly
 405 410 415
 Glu Tyr Asn Val Gln Gln Gln Cys Pro Gly Tyr Tyr Gln Ser His Leu
 420 425 430
 Asp Leu Glu Asp Leu Gln
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<210> 391

<211> 2627

<212> DNA

<213> Homo sapiens

<400> 391

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 tagcaccalc attattctgg ctggagcaat tgcactcact attggcttg gtaallccag 180
 gagcactcc atcacagta ctactgtcgc cctcagctggg aacattggg annatggaat 240
 cctgagctgc acctttgaac ctgacatacc accttctgat atcgtgctac atggctgaa 300
 ggaaggtgt ttaggtttgg tccatgaatt caagagaagg aaggatgagc tgcggagca 360

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cacttctaaa ggcaaggggg atcttaacct kaggtataaa actggagcct tcagcatgcc 540
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<210> 392

<211> 310

<212> PRT

<213> Homo sapiens

<400> 392

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His Ala Ser Ala His Ala Ser Gly Arg Gln Arg Gln Leu His Ser Ala
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Ser Thr Gln Ile Arg Trp Gln Pro Ser Pro Ala Met Ala Ser Leu Gly
          20                                25                                30

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Gln Ile Leu Phe Trp Ser Ile Ile Ser Ile Ile Ile Ile Leu Ala Gly
          35                                40                                45

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Ala Ile Ala Leu Ile Ile Gly Phe Gly Ile Ser Gly Arg His Ser Ile

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50 55 60
 Thr Val Thr Thr Val Ala Ser Ala Gly Asn Ile Gly Glu Asp Gly Ile
 65 70 75 80
 Leu Ser Cys Thr Phe Glu Pro Asp Ile Lys Leu Ser Asp Ile Val Ile
 85 90 95
 Gln Trp Leu Lys Glu Gly Val Leu Gly Leu Val His Glu Phe Lys Glu
 100 105 110
 Gly Lys Asp Glu Leu Ser Glu Gln Asp Glu Met Phe Arg Gly Arg Thr
 115 120 125
 Ala Val Phe Ala Asp Gln Val Ile Val Gly Asn Ala Ser Leu Arg Leu
 130 135 140
 Lys Asn Val Gln Leu Thr Asp Ala Gly Thr Tyr Lys Cys Tyr Ile Ile
 145 150 155 160
 Thr Ser Lys Gly Lys Gly Asn Ala Asn Leu Glu Tyr Lys Thr Gly Ala
 165 170 175
 Phe Ser Met Pro Glu Val Asn Val Asp Tyr Asn Ala Ser Ser Glu Thr
 180 185 190
 Leu Arg Cys Glu Ala Pro Arg Trp Phe Pro Gln Pro Thr Val Val Trp
 195 200 205
 Ala Ser Gln Val Asp Gln Gly Ala Asn Phe Ser Glu Val Ser Asn Thr
 210 215 220
 Ser Phe Glu Leu Asn Ser Glu Asn Val Thr Met Lys Val Val Ser Val
 225 230 235 240
 Leu Tyr Asn Val Thr Ile Asn Asn Thr Tyr Ser Cys Met Ile Glu Asn
 245 250 255
 Asp Ile Ala Lys Ala Thr Gly Asp Ile Lys Val Thr Glu Ser Glu Ile
 260 265 270
 Lys Arg Arg Ser His Leu Gln Leu Leu Asn Ser Lys Ala Ser Leu Cys
 275 280 285
 Val Ser Ser Phe Phe Ala Ile Ser Trp Ala Leu Leu Pro Leu Ser Pro
 290 295 300
 Tyr Leu Met Leu Lys
 305

<210> 393

<211> 203

<212> PRT

<213> Homo sapiens

<400> 393

Met Ala Ser Leu Gly Gln Ile Leu Pro Trp Ser Ile Ile Ser Ile Ile
5 10 15

Ile Ile Leu Ala Gly Ala Ile Ala Leu Ile Ile Gly Phe Gly Ile Ser
20 25 30

Gly Arg His Ser Ile Thr Val Thr Thr Val Ala Ser Ala Gly Asn Ile
35 40 45

Gly Glu Asp Gly Ile Leu Ser Cys Thr Phe Glu Pro Asp Ile Lys Leu
50 55 60

Ser Asp Ile Val Ile Gln Trp Leu Lys Glu Gly Val Leu Gly Leu Val
65 70 75 80

His Glu Phe Lys Glu Gly Lys Asp Glu Leu Ser Glu Gln Asp Glu Met
B5 90 35

Phe Arg Gly Ser Thr Ala Val Phe Ala Asp Gln Val Ile Val Gly Asn
100 105 110

Ala Ser Leu Arg Leu Tyr Asn Val Gln Leu Thr Asp Ala Gly Thr Tyr
115 120 125

Lys Cys Tyr Ile Ile Thr Ser Lys Gly Lys Gly Asn Ala Asn Leu Glu
130 135 140

Tyr	Lys	Thr	Gly	Ala	Phe	Ser	Met	Pro	Gln	Val	Asn	Val	Asp	Tyr	Asn
145					150					155					160

Ala Ser Ser Glu Thr Leu Arg Cys Glu Ala Pro Arg Trp Phe Pro Gln
365 170 175

Pro Thr Val Val Trp Ala Ser Gln Val Asp Gln Gly Ala Asn Phe Ser
180 185 190

Glu Val Ser Asn Thr Ser Phe Glu Leu Asn Ser Glu Asn Val Thr Met.
195 200 205

Lys Val Val Ser Val Leu Tyr Asn Val Thr Ile Asn Asn Thr Tyr Ser
210 215 220

Cys Met Ile Glu Asn Asp Ile Ala Lys Ala Thr Gly Asp Ile Lys Val
225 230 235 240

Thr Glu Ser Glu Ile Lys Arg Arg Ser His Leu Gln Leu Leu Asn Ser
245 250 255

Lys Ala Ser Leu Cys Val Ser Ser Phe Phe Ala Ile Ser Trp Ala Leu
260 265 270

Leu Pro Leu Ser Pro Tyr Leu Met Leu Lys
275 280

11729.1 contg

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 TTGTTTTGTTTTGTTTTGAGATGGAGTCTCACTCTGTTGCCCAAGCTGGAGTACAACGGCA
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 CAAATAGCTGGGATTACAGGCCCGCCGCCACCACGCTCAGCTAAATTTTTTGTATTTTTAGT
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 CCGCCTCGGCTCCCAAGGTCTGGGATTACAGGCTGAGCCACCACGCGCGCGCCCA
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11729-45.21.31.cons1

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 TAAATATTGTGTCAGAAGAGATTGAATACCTGCTTAAGAAAGCTTACAGAAGCTATGGAG
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 AGACATTCTCTTGCATGAAAAATGCTGTCTAGAGTCTCTGCTGACAAAGATGGA

11729-45.21.31.cons2

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 TGATCTAGCTCGCTGGCAACCTCCGGCTCCACGTTCAAAGTGATTCTCTGGCTCAGCCTCC
 CAAGTACCTGGGATTACAGGCCCGCCGCCACCACGCTCAGCTAAATTTTTTGTATTTTTAGT
 AGAGACAGGCTTTACCAAGGTGGCCAGGCTGCTTTGAACTCCTGACCTCAGGTGATCCA
 CCGCCTCGGCTCCCAAGGTCTGGGATTACAGGCTGAGCCACCACGCGCGCGCCCA
 AGCTGTTTTCTTTGTCTTTAGCGTAAAGCTCTCTGCCATGCAGTATCTACATAACTGACGT
 GACTGCCAGCAAGCTCAGTCACTCCGTGGTC

11731.1contg

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 CTGCTTGTATTATAGCTTTCTCTCAGTTCTCTCAGCTGATTTGTTAAATGAATCCATTCTG
 AGAGCTTAGATGCAAGTTCTTTTCAAGAGCAATCTAATTTCTTTAAGTCTTTGGCATAAT
 TCTCTCTTTCTGATGACTTTTATGAAGTAACTGATCCCTGAATCAGGTGTCTTACTGAG
 CTGCATGTTTTAAATCTTTCGTTTAAATAGGCTGCTCTCAGGGACCAGATAGATAAGCTTAT
 TTGATAATCTTAAAGCTCTTTGTAAGCTTGTTCATTTCCATAATTTCCAGGTCACAGCTGT
 TTATCCAAAACTTCTAGGTCAGTCTTTTGTGTTGCTTTTGTGATTTCGACAGCTTGTAGTCTG
 CCTGACATCTCTGATGCTTTTCAATCACTGCTTCCAGTTCCAGGTGGAGACTTTCTTTCT
 GGAGCTCAGGCTGACAATGCTTCTTTGTTCTCT

FIG. 1A

11731.2contig

AGCCAGATGGCTGAGAGCTGCAAGAAGAAGTCAGGATCATGATGGCTCAGTTTCCCACAG
 CGATGAATGGAGGGCCAAATATGTGGGCTATTACATCTGAAGAAGCTACTAAGCATGATA
 AACAGTTTGATAACCTCAAAGCTTCAGGAGGTTACATAACAGGTGATCAAGCCCGTACTTT
 TTCTCTACAGTCAGGTCTGCGGGCCCGGGTTTATGCTGAAAATATGGGCTTATCAGATCTG
 AACAAAGGATGGGAAGATGGACCAGCAAGAGTTCTCTATAGCTATGAAACTCATCAAGTTA
 AAGTTGCAGGGCCAAACAGGTGCTGTAGTCTCTCTCTCTCTATCATGAAACAAACCCCTATGT
 TCTCTCCACTAATCTCTGCTCGTTTGGGATGGGAAGCATGCCCCAATCTGTCCATTTCATCAG
 CCATTGCTCCAGTTTGCACCTATAGCAACACCCCTGTCTCTCTCTACTTCAGGGACCAATAT
 TCCTCCCTAATGATGCTGTCTCCCTAGTGGCTTCTGTTAGTA

11734.1contig

AATAGATTTAATGCCAGAGTGTCAACTTCAAATGATTGATACTGGCTGCTAGAGTGGCTGTG
 TTGAGTAGGTTTCTGAGGATGCCACCTGGCTTGAAGAAGAAAGACTGGCAGGATTAACAAT
 ATCTAAAATCTCACTTGTAGGAGAAACCAACAGCCACAGAGCTGCCACTGGTGCTGGCAC
 CAGCTCCACCAAGGCCAGCGAAGAGCTCAAATGTGAGAGTGGCCGTCAGGCTGGCACCAG
 CACTGAAGCCACCAGTGGTCTGGCACTGGCACTGGCACTGTTATTGGTACTGCTACTGGC
 ACCAGTCTGTGCCACTGGCACTCTCTTGGGCTTTGGCTTACTTCTGCTCCCCCTGGATCC
 GGGCTTGGGCCAGGGTCCGATATCAGCTTGGTCCGAGTTCCAGGGCCCGGCAGCAATCTC
 CGAGCCGAGCCCAATCCCAATTGAGCTCTAATCTGGGCCCTAGCCTTGGCTTCACTGCA
 GCTCAAGCTGCAGCTTCAAATCCGCTTCCAAGCCCTCTCGGTAC

11734.2contig

GCCAAGAAAGCCCGAAAGGTGAAGCATCTGATGGGCAAGAGGATGGCAGCAGTGATCA
 GAGTCAGGCTTCTGGAAACAGAGCTGGCCGAAGCGTCTCAAAGGCCCTAATGGCCCTCAAT
 GGGCCGAGGGCTTCAAGCGGTCCCATAGCTTTTGGGCCCCGAGGGCATCAAGGATCG
 GTTGGCTGCTTGGGCCCCGAGAGGCTTGTCTCTCTCTGAGATCACCTAAAGCCCGTAGGGC
 AAGCCCTGGGGTAGAGCTGGCAAGGTCTACTCATCCCAAGAGCCCTGAAGCCACCACCT
 CGGGATGTGGCCCTTTTGCAGGGAGCCGCAATGATTGTGAAGTACCTTTTGGCTAAG
 ACCAGACCAAGATTCGCATCAAGGCTTGGACATGCTCAAGGACATCATCAAGAATACA
 CTGATCTGTAGCCCCAAATCAATTAAGCAAGCAGGCTATTCTTGGAGCAAGOTATTTGGGAT
 TCAATTGAAGGAAAATGATTAAGAAATCAACCACTTGTACATTCTCTCAGC

11736.1contig

GAGGTCTCACTATGTTGCCACAGCTGTTCTTGAAGTCTTGGGATCAAGCAATCCACCCATG
 TTGCTCTCCAAAAGTCTGGGATCATAGGCTTGAGCCACCTCAGCCAGCCACCAATTTTCA
 ATCAGGAAGACTTTTCTTTCTTCAAGAACTGAAGGCTTTCCAGATATAGCTACACTATT
 GCTTGGCTCAGGCTGACTACAAAATGCTTCTTAAAGGTTACGATCGGTAAAGAAATAG
 ATTTTCTGAATGCAAAAATTAAGTGAAGCTAATGAATTTAGGTAATACATATTCATAAA
 ATAATTATTCACATAATTCCTCAATTAACAGAGAAATATGATGAATGCTTTGAGTTTCT
 TGGAGTAACTCCATTAATCTATCCCAAGCAAGCATATTAAGTATCACTOATAATAAGAA
 CAACAGGACCTTGTATATAATTTGGATATAGAAATAGTCTCTGGCTGTTTGTCTTAAAT
 TGATAAAAATTACTTGTCCATCTTTACTTCAGAAATCACAAA

FIG. 1B

11736.2contig

AAGCCGAAATGAGAAAGGAGGGAATAATCATGTGGTATTGAGCGGAAAAGTGGTGGATGA
 CAGGGCTCAGTCCTGTGTGAGAACTCTGGGTGGTGGTGTAGAACAGGGCCACTCAGAGTG
 GGOTGCACAGACCAGCAGGCTCTGTGACCTGTTTGTACAGGTCCATGATGAGGTAAC
 AATACACTOAGTATAAGGGTTGGTTAGAAAACCTTTACAGCAATTTGACAAAGTAATCTTC
 TGTCCAGTGAATCTAAAGAAAAAAATTGGGGCTGTATTGTATGTTTCCTTTTTCATTTTCAT
 GTTCTGAGTTACCTATTTTTATTGCAATTTACAAAAGCATCTCTCCATGAAAGGACCGGAAGT
 TAAAAACAAGGAGGTCCTTTATCACAGCACTGTCTAGAACACAGTTGAGAGTTATCCAC
 CCAAGGAGCCAGGGAGCTGGGCTAACCACAAGAAATTTTCTTTTGGTTAATCATCAAGTA
 CTTGAGTTGGAAATTGTTTAAATCCCATCATTAACAGGCTGGAXGTG

11739-1&2

CCGCGGCTCCTGTGTCAGACCCTGACCCCTCCCTCCCAAGGCTCAACCGTCCCCCAACAACCG
 CCAGCCTTGTACTGATGTCCGCTGGAGAGCCCTGTGCTTAAAGTAAGAATCAGGCCTTATTG
 GAGACATTCAAGCAAGGTTGGACAACCTACTTTCCAGAACAGAAAGGAAACTCATGCAT
 CAGAAAAGGTGACTAATAAGGTACCAGAAAGATATGGCTGCACAAATACCAGAAATCTGA
 TCAGATAAAACAGTTTAAAGGAATTTCTCGGGAACCTACAATAAACTTACAGAGACCTGCTT
 TTGCACTGTGTTACAGACTTCAGAACAAAGAGAACTAAACCTGAAAGAGACCACCTGTTC
 GAACATTCCTTACAGAAATAATTAATAATGACACAAAGAAATATCCATGACATTTGAGGAA
 TATCATAATCAGCAGAAATGAAGCCCTGGCAGCCAAAGCAGGACTCCTTGGCCCAACCACGA
 TAGAGAAGTCTCTGATGATGAACTTTGATGAAAGATTGCCAACAGCTCCTTTATTGGAAA
 TGAGGACTCATCTGATAGAAATCCCTGAAAGCAGTAGCCACCATGTTCAACCATCTGTGAT
 GACTGTTTGGCAAAATCGAAATCCCTGGAGCAACAAAATTCCTATTTACCAAGAAATATCA
 CAATAGAAAGCTTTATTTCTCACTGAAATAATAGATGCCAACAATGTTGAGGCCCTTATGA
 TTCACAGCTTGGTCACTTCAATAGAAAAATAACCAATGTTTCTTCAATGTTGACTGTTA
 ATTTAAAGCAACTTATGTCTTCATCATGTATGAGATAGAAAAATTTTATTACTCAAAAG
 TAAAAATAATGCA

11740.1.contig

GAAAAAAATATATAACACACTTTTCCBAAAAGGTGGGCTTAAAAGAGGAAAAGAAATTT
 CAUCAAATATAATCCAAATTAATGAAACTGACAAATTTAATCCAAAGAAATCACTTTTGTAAA
 TGAAGCTAGCAAGTGAATGATATGAAATAAAGCTGGAGGAAATAAAACACAAAGACTT
 GGCATAAGATATATCCACTTTTGAATTAAGCTTGTGAAGCATATTTCTGACAAATTTGT
 AAAGCCTTCTGATCTTCTTCTGTGCAATTTCAATAAAGGAGGCATATCACAATCCCAAGA
 GTAATAGAAAAAGAAAAAAGACATTTTTCATTTGAGATGAACCAAGACACAAAAACAA
 AACCAACAAGTGTGATGTCTAAATCTACCCCTCTGAAATAAACCTTGAACATCTCTACAA
 GGCACCTGATTTTGTAAATCTAACCTGAAAGAAATGTGATGACTTTTGTGGACATGAAA
 TCAGATGAGAAAACTGTGGTCTTTGCAAAACCTGAACTCCCTGAAAACCTTTTGA

FIG. 1C

11777.1&2.cons

CAGACGGGGTTTCTACTATGTTGGCTAGGCTGGTCTTGAACCTCTGACTTCAGGTGATCTGC
 CTGCCCTTGGCCCTCCCAAAGTGCTGGGATTACAGCCATAAGCCACTGCCCGGGCTGATCTG
 ATGCTTTCATAAAGGCTTTTCCCCCTTTTGGCTCAGCACTTCTCTCTCTGCCGCCATGTGAAG
 AAGGACATGTTTGGCTTCCCCCTTCCACCACCAATTGTAAGTTGTTTCTGAGGCTCCCCGGCC
 ATGCTGAACCTGTGAGTCAATTAAACCTCTTTCTTTATAAATTATCCAGTTTTGGGTATGTC
 TTTATTAGTAGAATGAGAACAGACTAATACAACCCTTAAAGGAGACTGACGGAGAGGATT
 CTTCCTGGATCCCAGGACTTCTCTGAAATGCTACTGACATTCTTCTTGAGGACTTTAAACTG
 GGACATAGAAAACAGATTCCATGGCTCAGCAGCTGAGAGCAGGGAGGGAGGCCAAGCTA
 TAGATGACATGGCCAGCTCCCCCTGAGGCCAGGTGTGGCCGAACCTGGGCAGTGTCTCCAC
 CCACCCACCAGGGCCCAAGTCTGTCTTGGAGAGCCAAAGCCTCAATCACTGCTAGCCTCA
 AGTGTCCCCAAGCCACAGTGGCTAGGGGAGCTCAAGGAAACAGTTCCAGTCTGCCCTACTT
 CTCTTACCTTTACCCCTCATACCTCCAAAGTAGACCATGTTTCATGAGGTCCAAAGG

11779.2.contig

AAGCGAGGAAGCCACTGCCGCTCTCTGGCTGAAAAGCGCGGCCAGGCTCGGGAACAGAGG
 GAACCCCAAGAACAGGAGCCGAAAGCTGCAAGGCTGAAAGGACAAAGCGAATGCCAGAGG
 AGCAGCTGGCCCGGGAGGCTGAAGCCCGGCTGAACGTGACGCCGAGCCGCGGAGACGG
 GAGGAGCAGGAGGCTGGAGACAAAGGCTCAGGCTGACAGGAGGAGCAGGAGCCACTGCA
 GAAGCAGAAAAGGCAAGCCGAAAGCCCTGCTCCCGGAAAGAGCTGAGCCCCAGCCGAGG
 AGCCGGGAAAAGCACTTTACAGAACAGGAAACAGGAGAGACAAAGAGCGAAGAAAGCCGCTG
 GAGGAGATAATGAAGAGGACTGCAAAATCAGAAAGCCGCGAAACCAAGAAAGCAAGATGC
 AAAGGAGACCCAGCTAACAAATCCCGCCGAGACCTTTGTGAAGCTGTAGAGACTCCGC
 CCTCTGGGCTTCCAGAAAGGATTTCTATTCCAGAAAGGAAGGAGCTTGGGCCCCCAXGGA

11781 & 37.cons

CTCTGTGAAAAGCTGATGAGGAATGAATTACCAATACCCATGTTCTCATCCCCAAGCAAA
 GTGCTGGGTCTGATTACTGCAACACAGAGCAACCAAGAGAACTTTTCTCATACAGGATC
 AGCAGGGCTCATACACTGGGCTGGATTCTACTCAGCCCAACAGAGCCGCTTCTCTC
 CAGTGTGACCTACAGACTCACTCTCTTACCAGATGATGTTGCCAGAGTCACTAGCCCAAT
 GTTGTCTCCCCAAGTTCCAGGAAGCTGGATTCTTTAAACTAACTGACCAAGCACTAGAGG
 AGATTCTTCTCTGCCCCAGAAAGGATTCATCCACACAGCAAGGATCCACCTCTGTCTCTG
 TAGCTGCAGCCAGCTGACTGTTGTGACACAGGCACTGACCATCAACAGACTTCCATGAGC
 GTTGTAGTCCAAACAGCTTCCAAACAACAAAGCAATACAGTGTACTGTAGCCCTTAAT
 TTAAGCTTTCTAGAAAGCTTTGGAAGCTTTGTAGATAGTAGAAAGGGGGGCATCACTGGA
 GAAAGAGCTGATTTGTAATTCACTTTGAAAGAAATTAAGTGAACATAATTTTAGGCCAA
 GTCAGAAAGAGAACATGCTCAGCCAAAGGCAACTGTAACTCAGAAATTAAGTTACTCAGA
 AATTAAGTAGCTCAGAAATTAAGAAAGAAATGGTATAATCAACCCCATATACCTTCTCTC
 TGGATTACCAAAATGTTAAGCAATTTTGGCTCTCAGCTATCCTCTAAATTTCTCTTAATTC
 AAATTTGTTTATATTACCTCTGGGCTCAATAAGCCCACTCTGTCCAGAAATTTGGAAGGCAT
 TTAGAAAATCTTTTGAATTTCTCTGCTTATGGCAATATGAATGGAGCTTATTACTGGG
 GTGAGGACAGCTTACTCCATTTGACCAGATTTCTTTGGCTAACACATCCCCAAGAAATGATT
 TTGTCAAGGAATTAATGTAATTAATAAATAATTCAGGATATTTTTCTCTACAAATAAAGTAA
 CAAT

FIG. 1E

11781-76-87J7

CTCTGTGGAAAACCTGATGAGGAATGAATTTACCAATTACCCATGTTTCTCATGCCCAAGCAAA
 GTCTGGGTCTGATTACTGCAACACAGAGAAGCAAGAACTTTTCTCATACAGGATC
 AGCAGGGGCTCATCACACTGCGCTGGATTCTACTCACCACACAGACCGCTTTCTCTC
 CAGTGTGACCTACACACTCACTGCTCTTACCAGATGATGTTGCCAGAGTCAGTAGCCATT
 GTTTGCTCCCCAAGTTCCAGGAACTGGATTCTTTAACTAACTGACCATGGACTAGAGG
 AGATTCTTCTGTGCGCAGAAAGGATTTCATCCACACAGCAAGGATCCACCTCTGTTCTG
 TAAGTGCAGCCACGTGACTGTTGTGGACAGAGCAGTGACCATCACAGACCTTCGATGAGC
 GTTTGAGTCCAAACACCTTCCAAAGAAACAAACCATATCAGTGTACTGTAGCCCCCTTAAT
 TTAAGCTTTCTAGAAAGCTTTGGAAGTTTGTGTAGATAGTAGAAAGGGGGCATCACCTGA
 GAAAGAGCTGATTTTGTATTTACGTTTGAAGAAATAAATACTGAACATATTTTTAGGCA
 GTCAGAAAGAGAACATGGTCAACCAAGCAACTGTAACTCAGAAATTAAGTTACTCAGA
 AATTAACTAGCTCAGAAATTAAGAAAGAAATGCTATAATGAACCCCATATACCCTTCTTC
 TGGATTCAACCAATTGTTAAGATTTTTCTCTCAGCTATCTTTCTAATTTCTCTAATTTCT
 AATTGTTTATATTTACCTCTGGGCTCAATAAGGCCATCTGTGCAGAAATTTGGAAGCCAT
 TTAGAAAATCTTTTGGATTTTCTCTGTGTTATGGCAATATGAATGGAGCTTATTACTGGG
 GTGAGGGACAGCTTACTCCATTTGACCAGATTGTTTGGCTAACACATCCCGAAGAAATGATT
 TTGTGAGGAATTATTTGTTATTTAATAAATAATTCAGGATATTTTCTCTACAAATAAGTAA
 CAATTA

117841 & 2

GGACGACAAGGCCATGGCGATATGGCATCCGAATTCAGCCCTTTGGAATTAATAAACCCT
 GGAACAGGGGAAGGTCAAACTTGGATGTCATGCTCTTCCATATCTATACCTTTGTGCACAGT
 TGAATGGGAACCTGTTGGCTTAGGGCATCTTAGAGTTGATTTGATGGAAAGCAAGACAG
 GAACTGCTGGGAGCTCAAGTGGGGAACTTGGTGAATGTGGAATAACTTACCTTTGTGCTC
 CACTTAAACCAAGATGTCTTCAACCTTTCTGACATGCAAGGATCTACTTTAATTCACACT
 CTGATTAAATAATTTGAATAAAGGGAAATTTTGGCACCTGATATATCTGCCAGGCTATG
 TACAGTAGGAAGGAATGCTTTCTGCTAACAAACCCCAATGCCACTGCTGACCTTATAAAT
 TATTTAATAAATCAACTATATC

11785.2.contig

GCCAGTGACATTCACCAATATGGGAAGCACTTCCCTTTCTCAGGATTCTCTGTAGTGG
 AAGAGAGCCACCCACTGTTGGGCTGAAGACATCTGAAAGTACGGAGAAGAACCTAAAAATA
 ATCAGTATCTCAGAGGGCTCTAAGGTGCCAAGAAGTCTCACTGGACATTTAAGTCCCAAC
 AAAGGCATACTTTCCGAATCCCAAGTCAAAACCTTCTAACTTCTGTCTCTCTCAGAGACA
 AGTGAAGCTCAAGAGTCTACTGCTTACTGGCAACTACAGAAACTGCTGTTACCCAGAA
 AAACAGGAGCAATTAAGAAATGGTTCGAATATTTCAAGCTCCGCAACAGGATGTGCTTT
 CTTTGGCCCAATTAAGCTTTCTTCTCTTCTTCTCTTTAATAACCACT

FIG. 1F

11713-1&2 cons

TGCGCTGAAAACAAACGGCCTCTTTACTGTAAATGCAAGCCACAGGTGCTTAGCCGTGGG
 CATCTCAACCACCAGCCTCTGTGGGGGGCAGGTGGCGCTCCCTGTGGGCCTCTGGGCCAC
 GTCCAGCCTCTGTCTCTCTGCTTCCGTCTCTCGACAGTGTTCGGGCATCCCTGGTCACTTG
 GTACTTGGCCTGGGCCCTCTGTGCTGCTCCAGCAGCTCCTCCAGGXGGTGGGCCGCTTCA
 CCGCAGCCTCATGTTGTGTCCGGAGGCTGCTCAGGGCTCTCTCTTCTCCGAGGGCTGT
 CTTCACCCTCCGGXOCACCTCTCCAGCTCCAGCTGCTGGCGGGCTGACAGCTGGCCAGC
 TCGGCCTTGGCCTGGCCGGTCTCTCTCTCARAGGCTGCCAGCCGGTCTCTCGAACTCTGGC
 GGATCACCTGGGCCAGGTTGCTGCGCTCGCTAGAAAGCTGCTGCTTACCGCCTGGGCATC
 CTCCAGCCCGCCTCTCTTCTGCCCAACAAGGCCCTGACAGCCAGATTCTCGCCCTCGGCCT
 CCCCCAGCTGGCCCTTCAAGCTCCGAGCCCGCTCTCTGAAGCTTCCGCTCCGACTGCTCCAG
 CTCGGAGAGCTCGGCCTCGTACTTGTCCCGTAAGCGCTTGAATGGGCTCTCGGCAGCCTTC
 TCACCTCTCTCTTGGCCAGCCCAATGTCGGCTCCAGCCGGTGAATGACAGCTCAATCT
 CTTGTCCCGCCTTTCGGGATTTCTTCCCTCAGCTCTGTTCGGGTTCCAGCCACGGC
 TCTCTCTCTCTGTGGCGCCGGCTTCCACGCTGCTCTCTCAAGCTCCAGCTGCTGCTTCA
 GGTATTCAAGCTCATCTGGCGGGCTGACAGCCTGGCCA

13690.4

CAACTTATTACTTGAAATTATAATATAGCCTGTCCGTTTGCTGTTTCCAGCCTGTGATATAT
 TTTCTAGTGCTTTCAGCTTAAAAATAAATAAGGTTTAAATTTCTCCCT

13693.1

TGCAAGTCACGGGAGTTTATTAATTAATTTTTTCCCGAGATGGAGACTCTGTGCGCCAGC
 CTGGAGTGCAATGGTGTGATCTTCCCTCACTGCAACCTCCAGCTCCTGGGTTCAAGCGATT
 CTCTCTCCACAGCCTCCCGAGTAGCTGGGATTACAGGTGCCCGCCACCACACCCAGCTAAT
 TTTATATTTTAGTAAAGACAGGCTTTCCTCAATGTCGGCAGGCTGCTTGAACCTTCTGA
 CTTCAAGTGATCCACCTGCTGCTGCTCCCAAGTGTGGGATTACAGGCTGAGCTACCC
 GTCCCTGGCCAGCCACTGGAGTTAAAGGACAGTCAATGTCCTCCAGCCTAAGGCGGCA
 TTTTCCCGCATCAGAAAGCTGGCGGCTCTGTACCTCAAAATAGGGCAGCTGTAAAGTCAG
 TCAGTGAAAGTCTCTCTCTAACTGCGCCAGCGCGGCCATTGGGCTCTGACACAGCCTTGGC
 AGGAGCCCTGCACTCTCAAAAGAAAGCTTCACTTCTCTTCCG

13694.1

CAGAGAACTCAAGAAAGATGTGCGCTTTTCTTTTAATGAATGAGAGAGCCCAATTTGATC
 CCTGAATCATTCAGAAAGCCCGCGCTCGGACAGCGCGGACCTAGGGATCGATCTCGAG
 GGACTTGGGGAGCCTCCAGAGAGCTTATAGCTCGAGCGCGACCGACCTCTCTCGCGGATCC
 CTGGGGAGCAGATGCCACCTACTGCAATGTCAGTTGGATTACAGATTCTCTCAGCAAGATAC
 TCTTGGCTGATAATGAAGAATTCAGCCTGAAGGCCAGGTTCTAGAGGATGATTCTGGT
 TCTCACTTCAATATGCTATCTCGACAGCTTCTTAATCTCCAGACCCACAAAGAAATCCTG
 TGTTCGATGTTGNGTCCAATCCTTGAACAAACAGCTGCGAGAAAGAACGAGACCCGGTA
 TAGTGGGTTCAATGAACAATTTGAAGAAAGACAGGTTCCAGACCTG

FIG. 1G

136942

GACTGTCCTGAACAAGGGACCTCTGACCAGAGAGCTGCAGGAGATGCAGAGTGGTGGCAG
GAGTGGAAAGCAAAGCAACACCCACCTTCTCCTTGAAGGAGTAGAGCAACCATCAGAAG
ATACTGTTTTATTGCTCTGGTCAAACAAGTCTTCTGAGTTGACAAAACCTCAGGCTCTGGT
GACTCTGAATCTGCAGTCACTTTCCATAAGTCTCTGTGCAGACAACCTGTTCTTTTGCTTC
CATAGCAGCAACAGATGCTTTGGGGCTAAAGGCAATGCTCTGACCTTGCAGGTGGGTGG
ATTTTGCTCTTTTACAACAATGTACATCCTTACTGGGCTGTGCTGTGCACAGGGATGTCCTTGC
TGGACTGTTCTGCTATGGGGAATGCTTCTTGGACTGTTCTTCAATGCTTAATTGCAGTATTA
GCATCCACATCAGACAGCCTGGTATAACAGAGTTGGTGGTTACTGATTGTAGCTGCTCTT
TGTCCTCTTCAATGGCACAAGTATTTCTTCAACATCCTGGCTCTGGGAAG

13695.1

GAATGTATATTTAATCATTCCTCTTGAACGATCAGAACTCTRAATCAGTTTCTATAACAR
CATGTAATACAGTCACCGTGGCTCCAAAGGTCCAGGAAGGCAGTGGTTAACACATGAAGAG
TGTGGGAAGGGGGGCTGGAAACAAAGTATTTCTTTCTTCAAAGCTTCATTCCTCAAGGCCCT
CAATTCAGGCAGTCAATTGTCTTGGCTTCAAAAGTCTGTGTGTGCTTCATGGAAAGGTATAT
GTTTGTTCCTTAATTTGAATTGTGGCAGCAAGGGTCTGGAGATCTAAATTCAGAGTAAG
AAAACCTGACCTAGAACTCAGGCAATTCTTTACAGAAGCTTGGCTTGCAGGGTAGAATGA
ANOGAAAGAAACTTAGAAGCTCAACAAGCTGAAGATAATCCATCAGGCCATTTCCCATAG
GCTTCCAACTCTGTTCACTGAGAGATGTTATCTG

12694.2

AGTCTCGAGTGGAGCAAAACAAAGAGCAACAAACAAARRAGAAAGCCAAAAGCGAAGAGGCTCCA
ATATGAACAAGATAAACTATCTCTTAAAGACATATTAGAAAGTTGGGAAAATAATTTCATGT
GAAGTAGACAGTGTGTAAAGAGTGTATAGTAAATATGACACCTGGAGACAAAGTGCATGCCC
AGAATCTCAGGGAGCTCCCGCTGCTCTCACTCCCGAGTGAAGGACAGGATAGTGCATG
TTCTTTGTCTCTGAATTTTAGTATATGCTCTGTAATGTCTCTGAGGACAGGATAGTGCATG
AGTCTATCCCAAGCATATCCAGATCTTATAATCCCAAAATTAAGCTGTAGTATGACCTAA
GACCGTCTTAATGACTGCTCACTTCCCAACTCAGGGGCGGCTGCATTTTAGTATGAGGCTCA
AATGATTCACTTTATGAGTCTTCCCAAGGTGCTTGGCTTCTCTTCCCAAGTGACAAATG
CCCAGTTGAGAAATATGATCTAATTTTAGCATAAACCGAGCAATCGGGGACCCC

1369-1

TAGCTGTCTTCTCACTCTTATGGCAATGACCCCATATCTTAAATGGAATTAAGATAAATGAAA
GTGTATTTCTTACACTCTGTATATGTAACAGAGAAGCTGAGGTGATAGCCCTCTTGTATTGT
CATCCATATCTCTGGCACTTCAGCGGGAACTTTCTGGAATATTGCCAGCGGACCATGGCAGA
GGGGACAGTGCATTCTGGGGAAATGGACATGGCTCAGCCTGGGTAAATGAGTGATATAC
ATTACCTCTGTTCACAACTCATTCGCCACCGGCACTCACAAAGCCCGACCAAAATACGAGAG
CCCAAGAAATGTAGTCTCTGTGATATGGTTTGGCTGTGTCCCAAGCCCAAAATCTCATCTTGA
ATTGTAAGGTCCCATAAATTCCTCATCTCTGTGGACCGGACCTGGTG

FIG. 1H

13697.2

ATCATGAGCATGTTACCAAAAGGATGGTACTAAACCAATTTGTAATCGTCTGTTTTCACT
 GCTTTGAAGATACTACCTGAGACTCGGTAAATTTATAAACAAGAGATTAAATTGACTCAC
 AGTTCTGCAATGCTGAAAGAGGCTCAGGAACTTACAGTCAATGGTGGAAAGGCAAGGAGG
 AGCAAGGCAATCTTACATCTCAGTAAGAGAGAGAGCCAGAGCAGGAGAACCTGCCACTT
 ATAAACCAATTCAGATCTCATAACTCCTATCATGAGAAAACATGGAGGAAACCAACCTC
 ATGATCCAAATCAGCTCCCGCCAGGTCCCTCCCTCGACACGTGGGGATTATAATTGAGGATT
 AGAGGGACACAGAGACAAACCAATATCATCATTCATGAGAAATCCACCTCATAGTCCAAT
 CAGCTCTACCAAGCCCCACCTCCAACTGGGGATTGCAATTCAACATGAGATTGGATG
 GGGACACAGATTCAAACCATATCATAC

13699.1&2

CATGGCCTTTCTCTTAGAGGCCAGAGGTGCTGCCCTGGCTGGGAGTGAAGCTCCAGGCAC
 TACCAGCTTTCTGATTTTCCCGTTTGGTCCATGTTGAAGAGCTACCACGAGCCCCAGCTCA
 CAGTGTCCACTCAAGGCCAGCTTGGTCTCTTGTCTGTCAGAGGCCAGGCTGGTGTGACCTT
 GCGAACTTGACCCGGGAACAACAGGTGGCCCAAGTGTGAGTGTGGCTGGCCCTCAACCT
 AGTGTCCCTCTCTCTCTCTGGAGCCAGTCTTGAGTTTAAAGGCATTAAAGTGTAGATA
 CAAGCTCTTGTGGCTGGAACAAACACCTCTCTGATAAAGCTCAGGGGGCACTGAGGA
 AGCAGAGGCCCTTGGGGGTGCTCTGTAAGAGAGCTCAGGCCATCAGCTCTGTCCCTC
 TGGTCTCCACAGTCTGTCTCTCCTCAGCTCTCATCTCTGGAGCAGCTGACCTGACTGGCCAC
 GCGGGGCACTGAGGCCACAGGCTCAGGCTGGCCGGCTACCTGCCACCTTATGCTTAC
 AAAGTAGAGTTGGCCCACTTCTCTCAGCTGAGGGAGCACTCTGACTCTTAACAGTCTT
 CTTGGCCCTCCATCATCTCTGGGTGGCTGGCTGTGTAAGAAAAGCCGGGCACTCTTTCTAA
 CACAGCCACAGGAGGCTTCTAGGGCATCTTCCAGCTGGGAAACAGTCTTAGATAAGTAA
 GGTGACTTGGCTAAGCCCTCTCAGCAGCTTGTATCTTGGAGTCTCAGACCAGACTGCATGT
 SAACAATGCAACCGAAGATCTCTCACTATAAAA

13703.3

CCAGAAGCTCTCTCTCTTGGACAATCGGAGGCTCTTGGAGACACAGAGGTTTCACCT
 TGGATGACCTCTAGAGAAATTCGCCAAGAGGCTCAGCTCTGGTCCCAACCTGCAGACCTC
 ACAACAGTCACTTGTCTAGGCTCTCTGTAGAAAGCTCACTTGGCTCCATTGCTGCTTCCA
 ACCAATGGCCAGGAGAGAGGCTTTATTTCTGCCCCACCCATTCTCTGTACCAGCCT
 CCGTTTTAGTCAAGTGTCTCTCAGCAAGGCTACCGTTACACAGTCA

13705.1

TGCATGTAGTTTTATTATGTGTTTTGCTCTGGAACCAAGTGTCCACGAGCATGACTGA
 ACATCACTCACTTCCCTACTTGAATAGAGGCCAAGCCCGAGAGCCCAGACCAGGATTG
 CAAACACACTGCCAGAGAAATTTGTCATCCGCTGTACGTAAAGTGTCTCTCACTGACCCA
 RACCTGTTACGTGGCACATCACTGTACAGTGGCACGTAAACAGCACTGTACTTTCTCCA
 TGAACAGTTACCTGCCATGTAATCTACATGATTCAGAAATTTTGAACAGTTAATTCTGACA
 CTTGAATAATCCCATCAAAAACCTAAATCACTTTGATGTTTGTAAAGCAACATAGCAT
 CACTTTACGACAGAAATCATCTGCAAAAACAGAAACAAAGGAATACATACATCTTAAAAAATG
 CTGGGTGGGCCAGGCACAGCTTCAAGCTCTTAAATCCAGCACTTTGGGAGGCTTAAGCG
 GGTG

FIG. 11

13718.2

AAACTGGACCTGCAACAGGACATGAATTTACTGCARGGTCTGAGCAAGCTCAGCCCTCT
 ACCTCAGGGCECCACAGCCATGACTACCTCCCCCAGGAGCGGGAGGGTGAAGGGGGCCTG
 TCTCTGCAAGTGGAGCCAGAGTGGAGGAATGAGCTCTGAAGACACAGCAGCCAGCCTTCT
 CGCACCAGCCAGCCCTTAAGCTGCTGACCTGAAACCAAGAACCCAGCTGAAGTGGCCCC
 TCCAAGGGACAGGAAGGGCTGGGGGAGGGAGTTTACAACCCAGGCCATTCCACCCCTCCC
 CTCTGGGGAGAAATGACACATCAAGCTGCTAACAAATTGGGGGAAGGGGAAGGAAGAAAA
 CTCTGAAAAACAAATCTTGT

13722.3

CATCGGTTTCACCACTGTTGGCCAGGCTGGTCTCGAACTCCTGGCCTCAAGCAATCCACCC
 GGCTCAGCCCTCCAAAAGTGGCTGGGATTACAGATGTGAAGCCATGGCACCATGCCAAAAGGC
 TATATTCTGGCTCTGTGTTTCCGAGACTGCTTTTAAATCCCAACTTCTCTACATTTAGATTA
 AAAAATATTTTATTCATGGTCAATCTGGAAACATAATTACTCATCTTAAGTTTCCACTGAT
 GTATATAGAAAGGCTAAAAGGCACAAATTTTATCAAATCTAGTAGAGTAACCAAAACATAAAA
 TCATTAATTACTTTCAACTTAATAACTAATTGACATTCCTCAAAAACACCTGTTTTCAATCCT
 GATAGGTTCTTTAATTTTCAAAAATATATTTGCCATGGGATGCTAATTTGCAATAAGGCCG
 ATAATGADAATACCCCAAACTGGA

13722.4

GTTCGACCCCCAGCCACTGCAAAAGACACTTCTTCCCGAGCTGTGGCCGGCAGAAGCTGAT
 GTTCCTTTTATTAATGCTTCTGATCCSAATTTGATGAGATGTTTGTGGGTGTCCAGCCAG
 CCGTATCAGAAATCTTTTAGCCAGCAAGGCCGAATGCTGCTTGTOTTATATTTATTGAT
 GAATTAGATTCGTTCCTGGGAGACAGAAATGAAATCTCCAATGCAATCCATATTCAAGCCAGA
 CCATAAATCAACTTCTTCTGAAATGGATGGTTTAAACCCAAATGAAGGAGTTATCATAT
 AGGAGCCCAAAACTTCCAGAGGCAATAGATAATGCTTAATACCCTCCTGGTGGTTTGA
 CATGCAAGTTACAGTTCCAAAGCCAGATGTAAGGTCGAACAGAAATTTTGAATGGTA
 TCTCAATAAAATAAAGTTTGAATCAATCCGCTGATCCAGAAATTATACCTTCAGGTAAGT
 GTGCTTTTCCGAGGAGAGTTGGCAGAAATCT

13724-13698-13748

GCCTACAACATCCAGAAAGAGTCTACCTGCACTGCTGCTSCGTCTCAGAGGTGGGATGC
 AGATCTTCGTGAAGACCTGACTGGTAAGACCATCACTCTCGAAGTGGAGCCGAGTGACA
 CCAATGAGAAAGCTCAAAAGCAAGATCCARGACAAGCAAGGCRTYCCTCTGACCAGCAGA
 GGTTCATCTTTCCCGGAAAGCAGCTGGAAGATGGGCCACCCCTGTCTGACTACAACATCC
 AGAAGAGTCTYACCTGCACTGCTGCTCTGCTCAGAGGTGGCATGCAATCTTCGTGA
 AGACCTGACTGTAAAGACCATCACTCTGAGGTGGAGCCCACTGACACCATCGAAGATG
 TCAAGCCAAAGATCCAACATAAGGAAGCCATCCCTCCTGATCAGCAGAGGTTGATCTTTG
 CTGGGAAGCAGCTGGAAGATGCAACCACTCTGCTGACTACAACATCCAGAAAGAGTCCA
 CTCTGACATTCCTCTCGGCTCAGGCGGGGTGCTAAGTTTCCCTTTTAAAGTTTCMAC
 AAAATTCATTCGACTTCTCTTCAATAAAGTTGTTGCAATCCC

FIG. II

13730.1

GAAGTGGGCGCTGAGGCCAAGTCATGCGCTTGTGTCCGGCATCTGCCGTGTACCTGTGTGCC
TGCCCTTCACCCCTCCCTCCTGCTTCTGTAGCCAGCACCATCTCCAAATAGCCTATTCTT
CCTGCCAAATCACACACACATGCGGGCCACACATACCTGCTGCCCTGGAGATGGGGAAAGTA
GGAGAGATGAATAGAGGCCCATACATTGTACAGAAAGGAGGGGCGAGGTGCAGATAAAAGC
AGCAGACCCAGCGGCAGCTGAGGTGCAATGGAGCACGCTTGGGGCCGOCATTGGGCTGAGC
ACCTGATGGGCTCATCTCCTGAAATCCTCGAGGCAGCGCCACAGCAGAGGAGTTAAGTGG
CACCTGGGCGGAGCAGAGCAGGAGACTGAGGCTCAGAGTGGAGGCTAAGCTGCCCTGGA
ACTCTCAATCTTGCCTGCCCTAGTATGAAGCCCTTCTGCCCTACAAATCTCTGA

13732.1

ATGGATCTTACTTTGCCACCCAGGTTGGAGTGCAGTCTGCAATCTTGGCTCACTGCAGCC
TTAACCTCCCAGGCTCAAGCTATCCTCCTGCCAAAGCCTTCCACATAGCTGGGACTACAGG
TACACNCCCACCACACCCAGCTAAATTTTGTATTTTTGTAGAGACGGGATCTGCCAC
GTTGCCCAGGCTGGTCCCATCCTGACCTCAAGCAGATCTGCCACCTCAGCCCCCAACCT
GCTAGGATTACAGGCTGAGCCACCCACCCAGCCTTTGTTTTGCTTTTAATGGAATCACC
AGTCCCCCTCCTGTCTCAGCAGCAGCTGTGAGAAATGCTTTGCATCTGTGACCTTTATGA
AGGGGAACCTTCCATGCTGAATGAGGCTAGGATTACATGCTCTTTCCTGTTCCGGGGGCTCAAG
AAAGCCTCAGACTCCAGCATGATAAGCAAGGTCAG

13732.2

ATAGGGGCTTTAAGGAGGGAAATTCAGGTTCAATGAGGTGTAAGGCCAGGGCTCTTATCC
AGTAAGACTCGGGTCTTAGATGACAAAGAGACACCCGAGGCTCTTCTCTGCGGTGTG
AGGATGCATCAAGAAGCGGGCTCTGTGAAGCGAAGGAGAGGCGGACCCAGAGAAACCGAC
ACCTTCATCTTCCACTTCCAGGCTCTAGAACTGAGAAATAAGTGTCTGTGGTTAAGCCA
CCCACTTGTAGTAATCTCTTAAGGCTTCTTAAGCAGACTAAGAAACAAACAGCCAAAT
AACTGATGGCTTCCCTGTCTCTGTAAATTTGCTATGAGAGAACTTTCACTCACTGTTTT
GCAGTTTCTCCCTCAGTCCCTGCTCTTCTCTACATAATCCCAATTCATTTATAGTTT
ATGGCCAGGCAGAGTCAATTCATCAGCCATCTCTGAGCTAAACCAGCAGCTCTCTGCT
CACTTCTTCACTGCTGCTCATCATCAGCCCTCTTCCAGAGATTTCATTTCTCTCCGTTGCCA
GGTACTTCACGCACCAAGCTCA

FIG. 1M

13732.1

GGATAATGAAGTTGTTTTATTTAGCTTGGACAAAAAGGCATATTCCTCTATTTTCTTATAGA
 ACAAATATCCCCAAAAATAAAGCAAGCATATAATCTTGAATGTGTAAATAATCCAGTGATA
 AACAAAGAGCAGTACTTTAAAAGAAAAAAATATGTATTTCTGTACAGGTAAAAATGAGAA
 TCAAAACCATTTACTCTGCTAACTCAATATTTTTGCTTTCTTTTGGTTAAGAGAGGCAAT
 GCAATACACTGAAAAAGGTTTTATCTTATCTGGCAATTGGAATTAGACATATTCAAAACCCC
 AGCCCCCATTTCCAAACTTTAAGACCACAAACAAAGTAATTTACTTTTCTGAACATTGGTTTT
 TTCTGGAAAAATGGGAATTAATAAAATAGACTTTGCAGACTCTTATGAGATTAAATAAGATA
 ATGTATGAAAATCTTTCTTTCTTTTACTTTCTTTTCTTTTGGAGATGGAGTCTCACCCCGT
 CACCCAGGCTGGAGTACAGTG

13732.2

CCACTGCACTCCAGCCTGGGTGACGGAGTGAGACTCTGTCTCAAAAAACAAACAAACAA
 ACAAAACAAAAAAGTGAAGGAAATAGAGTTTCTCTTCTCATATATGAATATATTATTT
 CAACAGATTGTTGATCACTACCATATGCTTTGGTATTTGTTCTAAATGCTGGGGATACAGCA
 AGAGGTTCTGAGAACTTCATGGAGCATGAAAGTAAATAAACAAAGTTAAATTCAAAGCCC
 AGGCATGGTTGCTCACACCTTTAGTCCAGCAGCTTTGGGAGGCTGAGGAGGTTGGATCACT
 TGGGCCACGGAGTTCAAGGCTGCAAGTGAAGCAAGATTGTGCCACTACTCTCCAGGCTGGG
 CAACAGAGCAAGACCCCTGTCTCAAGGCGCAACAAAAAGTTAAATTCAGATTTTGTTAAAGTG
 CTGTAAAGGAAGTAAATAGCTTGATAATCAAGAGAGCAGCTGAAGGCCAGGCGTGGTGGC
 TCACCCCTGTGGTCTAACGCTTTGGCAAGCCCGAGCGGGGGATCACAAGGTCAGGAGAA
 TTTTGGCCAGGCATGGTG

13736.1

AGAATCCATTATGCGCTTTAACTAGTTACACAAGTGAATCAGTTTGGCACTACTTTA
 TACAGGGAATTACGCTGTGTATCCGAGACTTAAATACTGTACCAGGACCAGTCTGTGCT
 TAGGTCTGTATTCAGTCAATTCAGCACTAGATACTAAATAATCTGTAGTGTCTCTTTAA
 GGAAGACTGTACAGGCTGTGTGCAAGATGACATTCACCAATTTGTGAATTAATTCACCCC
 ACAAGATACCTTCACTCTATAAAGTCTCTATAGGCAACATGTGGTGTAGCATTOAGAG
 ATCCACACAAAAATGTTACATAAAAGTTGAGACATTTCTAATGATAAGTGAAGTCAAAAAA
 AAAAAAACCCCACTCTCAATTTCTTAAAGATAAAGCAAAATATTTTAAAAACACAAA
 AAATGGCATTACGTGGGTACAAACC

13737.1&2

CAAAATTTAAATATAATCTTTGAAACAAAGTTGAGAKGAAATAAAATCAAGTTTGCAA
 AAACCTGAAAGATTAACTTAATTTGTCAATATTCCTCATTCGCCCCAATCAGTATTTTATA
 TTTCTATGCAAAAGTATGCGCTTCAAGCTGCTTAAATGATATATGATATGATACACAAACCA
 OTTTTCAAAATAGTAAAGCCAGTCACTTGGCAATTTGTAAGAAATAGGTAAAGCATTATAAG
 ACACCTTACACACACACACACACACACACACACACOTGTGCACGCCAATGACAAAAAAC
 AATTTGGCTCTCTCTAAATAAAGAACATGAAGACCCCTTAATTTGCTGCCAGGAGGGAAACAC
 TGTGTACCCCTCTCTCAATTCAGGTAATTTCTTTAATCCAATAGCAATCTGGGCATAT
 TTGAGAGGAGTGATTCTGACAGCCACGTTGAAATCCTGTGGGGAACCAATTCATGTCCACC
 CACTGGTGGCCTCAAAAAATGCCAATAATTTCTGCTGCACTTCTGCTCTCTCTTCCA
 CATCTGCACATAGACCCAGACCCGCTGGCCCTGGCTGGGCAAGCATTCCTGGTGAAGC
 AAGTCATAGGTCTGCTCTTTGACCTCACAGAAGCGATACACCAAAATGCTGTGGTCAAT
 TGTCTAATCCAG

FIG. 1N

13738.1

TTTGACTTTAGTAGGGGTCTGAACTATTATTTTACTTTGCCMGTAAATTTARACCYTATA
TATCTTTCAATATGCCATCTTATCTTTCTAATGBCAAGGGGAACAGTGTCTAAMCTGGCTTCT
GCATTWATCACATTAATAAATGGCTTTCTTGGAAAATCTTCTCATATGAAATAAAGGATCTT
TTAVAGCCATCATTTAAGCMGGNTTCTCTCCAACACGAGTCTGCTASGGGGGGGKGAGCT
GTGAACCTGTGGCTGAAGGCTTTCCCATACACACTGCAATGACMTGGTTTCTGACCAGBOTG
AGTTA

13738.2

AGAGAAGCCCCATAAAATGCAATCAAGTGTGGGAAGGCCCTTCAGTCAGAGCTCAAGCCCTTT
CCTCCATCATCGGGTTCATCTGGAGAGAAACCCCTATGTATGTAATGAAATGCCGGCAGAGCC
TTTGGTTTAACTCTCATCTTACTGAACACGTAAGGATTCACACAGGAGAAAACCCCTATG
TTTGTAAATGAGTGGGGCAAAGCCCTTTCCTCGGAGTTCCACTCTTGTTCAGCATCGAAGAGT
TCACACTGGGGAGAAAGCCCTACCAAGTGGCTTGAATGTGGGAAAGCTTTACAGCCAGAGCTC
CCAGCTCACCTACATCAGCCGAGTTCACACTGGAGAGAAAGCCCTATGACTGTGGTGGACTO
TGGGAAGGCCCTTCAGCCGGAGOTCAACCTTCATTGAGCATCAGAAAGTTACAGCCGGAGA
GACTCGTAAGTGCAGAAAACATGGTCCAGCCCTTGTTCATGGCTCCACCCCTCACAGCAGAT
GGACAGATTCCCACTGGAGAGAAAGCAGCCAGAAACCTTTAACCATGGTGCAAAATCTCAT
CTGCCCTGGACAGTTT

13739.1&2

GAGACAGGCTCTCACTTTCTCAACCCAGCCCTGGAATGCAAGTGGTGGATCTTACGTAGCTCA
CTGCAGCCCTGACCTCTCTGGACTCAAAATTTCTGCTGCTCAGCCCTGCAAGTAGCTGGG
ACTGTGGGTGCATGGCAACATGCTCTGCTAATCTTTGTAGTTTGTGTAAGAATGGGGTTTT
GCCATGTGGCATCTCTGCTTTGAAGTCTGTGAGTCAAAAGATCTGCCCCACCTCGGGCTC
CCAGAAATGTTGGGATTACAGGGGTAAACCAACAGCCCTGCCCCATTAGGGTATTCTTAGG
ATCCACTGTCTCACTGAGATTAATCATAGAGATGATAAOCACCTGGAAAGAAAATTTT
ACTAGCCCTTGGATATTTTCTCTTTTCAAGCTTTATACAGAGGATGGATCTTTAGTTTTC
CTTAACTGATAATAAAACAATGAAAGGAAATAAGTTTACCTGAGATTACAGAGATAAC
CGGCATCACTCCCTTGGTCAATCCCACTTTTACCATCAATTTTTCAGAGGTCAGGA
TAAAGCCCTTAGTCTCTCTTCCCACTTTCTTCCACTTTTGTAAACCTGTGGCTGACA
AATGGAATGACAGCGTATGCCATGACTATCCATTTGTGAGGATAGCTGTCAATTTT
CCACCAATCCCTTGTCTCTCTTTGGAGAGATCTTCTTATCAGCTAGTCTTTGGCAAAAGTA
ATTGCAACTTCTCTAGGATTTCTATTGCTCCCTTCCACTGCTGGAACCCCTGGGACCAGGA
CTAAACCTCCAG

13741.1

ATCTCATATATATATTTCTTCTGACTTATTGGTTGCTTCTGNCACCCATTTAAAATATC
ACAGAGACCAAAATAGAGCGGCTTTCTGGTGGAAAGCATGGCAGTCAACAGGACAAAATAC
AAAACCTAGGGGGCTCTGTCTTCTCATACATCAATTTTCAAGTATTTTTTTATGTACA
AAGAGCTACTCTATCTGAAALAAATTAATAAATGAGACAAATAGTTTATGTCATC
CTAGCAAGAAAGAAATGGGAAGCAAGAAAGGGGGCAGTTGGGTACAAATCTGTCTCCCTGT
TCCCAGGGACCACTACCTTCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT
GGCAAGTGGCAAGGTAGGTGGGAGGAGTGGAGACAGGAACCAAGCAATATCTTTGGC
CTGGAAAGATAAGGAGAAAGTCTCAGAAACCACTGGTGGGAAGCAATCCCAACNGGCCGT
GCCCCAGAGCTTCCCACCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT
GCTTCTTGGGTGGGNGCAACTGGGCTTTGGGCCCCGTGTGGAAG

FIG. 10

13742.1

AAACATTGAGATGGAATGATAGCGTTTCCAGAAATCAGGTCCATATTTTAACTAAATGAA
AATTATGATTTATAGCCTTCTCAAATACCTGCCATACCTTGATATCTCAACCAGAGCTAATTT
TACCTCTTTACAAATTAATAAGCAAGTAACCTGGATCCACAATTTATAATACCTGTCAATT
TTTTCTGTATTAAACCTCTATGATAGTTTAAAGCCTATTAGGGTACTTAATCCTTACAAATAA
ACAGGTTTAAATCACCTCAATAGGCACTGCCCTTCTGGTTTTCTTTGACTAAACAAT
CTGAATGCTTAAGATTTTCCACTTTGGGTGCTAGCAGTACACAGTGTACACTCTGTATTCC
AGACTTCTTAAATATAGAAAAAGGAATGTACACTTTTGTATTCTTTCTGAGCAGGGCCG
GGAGGCAACATCATCTACCATGGTACGGGACTTGTATGCATGGACTACTTTA

14351.1

ACTCTGTGCCCCAGGCTGGAGCCCBATGGMGGATCTGACTCCCTGCAAGCTMCGCCCTC
ACAGGWTGATGCCATTCTCCTGCCCTCAGCATCTGGAGTAGCTGGGACTACAGGGGCCAGC
CACCATGCCAGCTAATTTTT

14351.2

ACCTTAAAGACATAAGGAGAAATTAATCTGGGAGAGAAAGCTTACAAATCTAAAGGTTTCTG
ACAAGACTTGGGAGTGATTACACACTGGAAACAACATACTGGACTTCACACTGGABAGAAA
CCTTACAAGTGTAATGATCTGTGGAAGGCTTTGGCAAGCAGTCAACACTTATTCACCATC
AGGCAATTC

14354.2

AGTCAGGATCATGATGGCTCAGTTCCACAGGATGAATGGAGGGCCAAATATGTGGGC
TATTACATCTGAAGAAGCTACTAAGCATGATAAGCAATTTGATAACCTCAAAGCTTCAGGA
GGTACATAACAGGTGATCAAGCCCTTACTTTTTCTACAGTCAGGTCTGCCGGCCCCCGG
TTTTAGCTGAATATGGCCCTTATCAGATCTGAACAAAGGATGGGAAGATGGACCAGCAAG
AGTTCTCTATAGCTATGAAGTCATCAAGTTAAAGTTCCAGGGCCAAACAGCTGCCCTGTAGT
CCTCCTCCTATGATGAAGCAACCTCCTATGTTCTCTCCACTAACTCTGTGCTCTTTTGGGA
TGGGAAGCATGCCCAATCTGTCCATTGATCAGGCAATTCCTCAGTTCCACCTATAAGCAAC
ACCTTGTCTTCTGCTACTTCAGGGACCAAGTATTCCTCCTAATCATGCCCTCT

14354.1

CTTTCGATTTCTTCAATTTCTCAGCTTGAATTTATGAAGTTGTTCAAGGGGCTAACTGCTG
TGATTTATAGCTTCTCTGACTTCTTCACTGATTTGTTAAATGAATCCATTTCTGAGAGCT
TAGATGCCAGTTCTTTTCAAGAGCATCTAATTTCTTTAAGTCTTTGGCATAATTCTTCC
TTTTCTGATGACTTTCTATGAAGTAACCTGATCCCTGAATCAGGTGTGTTACTGAGCTGCAT
GTTTTAATTTCTTTGTTTAAATAGCTCCTCTCAAGGACCAGATAGATAAGCTTATTTTGAT
ATTCCTTAACTCTTGGTGAAGTTCTTGAATTTCCATAATTTCCAGCTCACACTGGTTATCC
CAAATCTCT

FIG. 1P

16431.1.2

GTGGAGGTGAAACGGAGGCAAGAAAGGGGGCTACCTCAGGAGCGAGGGACAAAGGGGGC
 GTGAGGCACCTAGGCCCGCGCACCCCGGCGACAGGAAGCCGTCTGAACCGGGCTACCGG
 GTAGGGGAAGGGCCCCCGTAGTCTCGCAGGGCCCCAGAGCTGGAGTCGGCTCCACAACC
 CCGGGCCGTGGGCTTCTCACTTCTGACCTCCCGGGCGCCCGGGCTGAGGACTGGCTCG
 GCGGAGGGAGAAAGAGGAACACACTTGAGCAGCTCCCGCTTGCTCGCAACTCCACTGCC
 GAGGAACCTCTCATTTCTTCCCTCGCTCTTCAACCCCCACCTCATGTAGAAAGGTGCTGAA
 GCGTCGGAGGGGAAGAAGAACCTGGGCTACCGTCTGGGCTTCCCMCCCCCTTCCCGGG
 CGCTTGGTGGGCGTGAGTTGGGCTTGGGGGGCTGGGTGGGGCTTCTTTTTTGGAGTGCT
 GGGGAACTTTTTCCCTTCTTCAGGTACGGGGAAGGGGAATGCCCAATTCAGAGAGACAT
 GGGGGCAAGAAGGACGGGAGTGGAAGGAGCTTCTGGAACCTTGCAGCCGTCTACGGGAGG
 CGCCAGCTCTAACAGCAGAGAGCGTCAACCGCTTGATCGAAGCACAAGCCGCATAAGTC
 CAAACACTCCAAGACATGGGGTTGGTGACCCCGAAGCAGCATCCCTGGGCACAGTTAT
 CAAACCTTTGGTGGAGTATGATGATATCACTCTGATTCGACACCTTCTCCGATGACATG
 GCTTCAAACTAGACCGAAGGGAGAAAGACGAACCTCGTGATCAGATCGGAGCGACCCG
 CTGCACAAACATCGTCACCACCAGCAGGCGCTTCCCGGACTTACTAAAAGCTAAACAG
 ACCG

16432-1

GACATGTTTGGCTGCACGGGACAGAGACAATGGGATTAGCCAGTCTCACTGTTCTTTAT
 OCTTCCAGAGAGGATGGGACAGCTCTCAGCTCAGAAATCCAGGTCAGAAAGGCCATGCTG
 GTTGGGGGCCCCCGGAAGCAGGCTCCGATCTCTCGGATCAGCGTAGACCCGCTGCTC
 AGGCTTGGGGTACCAAACTCATGCTCTCTACTGTTTTGGCCCCATCGGGTGAGAGGAAAC
 CTAGAAAAAGATTTGGTGGTCTTAAGGAATCAAGTGGGCTCTATCTCGGCATCCAAATGCT
 GGTGACAACATATTCCTCTCTCCAGCAGACAGACTCGGTGACTCCACACTGGGCTGAGTGG
 CCTCTGGAGGCTCTGTGGCTTAAGGACGGCTCCCTAAAGGCTGATCGGCTGAACTGGGTGG
 GGTCAAGGGTTCTGACCGTTCTCTCCATCCCAATAACCCCTGTCAATGAGCTCACACTGT
 GGTCA

16432-2

GATGGCATGGTGGTGGCTAATOTCCCTGCTGGGATGGAGCACTTCTCTCTGTGAGCCCAAG
 GGACCCGCTGTCCTTGGAGCTTGGGGCAAGGAGGGAAGAGTATACCAAGGAAGGTGGG
 GCTGCAGCCAGGGCCAGAGTCACTTACGGGACTGCTCTCGGCTCAAACTCTCTCG
 GGGACTGCTCAAGAGTGTGCTCCCTCGAGTTTCCCCCAACTTCCCTGGCCACCCCTGAA
 GGTGCTTGGCTGCTCCAGGCTCTAGCTTGGCTGATGGGTTTCTCCAGGACACAAATATC
 ATTAAGCCACCCCTCTCTCAGCTTCTCAGGCGGACATGTGGGACAGGCTGTGCTCACA
 CCCCCTGGCTTGGCTTCCCTCCATCAGGAGGAGGAGGAGGAACTTCCGAAAGCTCCAG
 CATCTCAGCAGCCCTCAAAAGTCTCTCTGGGCAAGCTCTGCTCTCTGACTGGAGGTCA
 TCTGGGCTTGGCTTGGCTCTCTCTCC

172843

TAAAAAAGTETAACAAAGCTTTATTTAGACTTTCTTCATGCCCCCAGATCCAGGATGTCTA
 TGTAAACCGTTATCTTACAAAGCAAGCACAATTTGGTATAACTAAGTCAGTCACTTGC
 TTAAGTGAATACCGTCCATCCAAAGTGGTTTAAAGTAAACTACCTGACGATATTTGGC
 GGGATCTCTCACTTTGGAATCTTCCGGGTTTGTCCAGGCTTCCGGCTCTCTTTCTTGGC
 ACTCATCGGGACAGGATCTGTCTCTCTGTGGGGGCTGGAGCCCTTACGTGAAGCT
 GAAGGTATCGACCTAGCGGCTCTAGGCACTGGGACCTTCATCCGGAATTAACAAGGG
 TCGGGAGAGGCTCTTGGCTATGTGGC

FIG. 1Q

17190.2

CAAGTTGAACCTCAGGCTTGGCAGAGGTGGAGTGTAGATGAAAACAAAGGTGTGATTATC
AAGAGGATGTGAGTCCTTTGGGTGTAGGAGAGAAAGGCTGTTGAGCTTCTATTTCAAGAT
ACTTTTACCTGTGCAAAAAGCACATTTTCCACCTCCTTCTCATGGCATTTGTGTAAAGGTGAG
TATGATTCTATTCCA?CTGCA?TTT?AGAGGTGAAGAATAACGTACAAGGGATTCAAGTAT
TAGCAAGGGACCCCTCACTAAGTGTGATGGAGTTAGGACAGAGCTCAGCTGTTTGAATCT
CAGAGCCCAGGCAGCTGGAGCTGGGTAGGATCCTGGAGCTGGCACTAATGTGAGGTGCAT
TCCTTCCAACCCAGGCTCAGATCCGGAAECTGACCGTCTGACCCCCGAAGGGGAGGCAG
GGCTGAGCTGGCCCGTTGGGCTCCCTGCTCTTTCAACCACACTCTCGCTTTGAGGTGCTG
GGCTGGGACTACTTCACAGAGCAGC

17191.2&89.2

TGGCTGGGCAGGATTTGGGAGAGAGGTAGCTACCCGGATGCAGTCCCTTTGGGATGAAGAC
TATAGGGTATGACCCCATCATTTCCCCAGAGGTCTCGGCTCTCTTTGGTGTTCAGCAGCTG
CCCTTGGAGGAGATCTGGCCTCTCTGTGATTTCACTGTGCACACTCCTCTCTCTGCCCTC
CAGCAGAGGCTTGTGTAATGACAACACCTTTGCCAGTGCAAGAAAGGGGGTCCGTGTGGT
GAATGTGCCCGTGGAGGGATCTGTGGACGAAAGGCCCTCTGCTCCCGGCCCTGCAGTCTGG
CCAGTGTGCCCGGGCTGCAGTGGACGTGTTTACGGAAAGAGCCGCCACGGGACCCGGGCTT
GGTGGACCATGAGAAATCTCATCAGCTCTCCCCACCTGGGTGCCAGCACCAAGGAGGCTCA
GAGCCCTCTGCGGAGGAAAATTGCTGTTCACTTCTGTGGACATGCTGAGGGGAAAATCTCT
CACGGGGCTTGTGAATGCCACGCCCTT

FIG. 1S

AGCCAGATGGCTGAGAGCTGCAAGAAAGTCAGGATCATGATGGCTCAGTTTCCACAG
CGATGAATGGAGGGCCAAATATGTGGGCTATTACATCTGAAGAACCTACTAAGCATGATA
AACAGTTTGATAACCTCAAACTTCAGGAGGTTACATAACAAGGTGATCAAGCCCGTACTTT
TTTCTACAGTCAGGTCTGCGGGCCCCGGTTTTAGCTGAAATATGGGCCTTATCAGATCTG
AACAAAGGATGGGAAGATGGACCAACAAAGAGTTCTCTATAGCTATGAAACTCATCAAGTTA
AAGTTGCAGGGGCCAACAGCTGCTGTAGTCTCTCCCTCTATCATGAAACAACCCCTATGT
TCTCTCCACTAATCTCTGCTCTGTTGGGATGGGAAGCATGCCCAATCTGTCCATTTCATCAG
CCAATTGCTCCAGTTGCACCTATAGCAACACCCCTTGTCTTCTGCTACTTCAGGGACCAAGTAT
TCTCCCTTAATGATGCTCTGCTCCCTAGTGCCTTCTGTAGTACATCTCTATTACCAAAATG
GAACTGCCAGTCTCATTCAGCCTTTATCCAATCTTATTTCTTCTTCAACATTGCTCATGCA
TCATCTTACAGCCTGATCATGGGAGCAATTTGGTGGTGTCTAGTATCCAGAAAGGCCAGTCTC
TGATTGATTTAAGGATCTAGTAGCTCAACTTCTCAACTGCTTCCCTCTCAGGGAACTCACCT
AAGACAGGGACCTCAGAGTGGGCAGTTCTCAGCCTTCAAGATTAAAGTATCGGCAAAAA
TTTAAATAGTCTAGACAAAAGGCATGACGGGATACCTCTCAGGTTTTCAAGCTAGAAAATGCCC
TTCTTCACTCAAACTCTCTCAAACTCAGCTAGCTACTATTGGACTGTGGCTGACATCGAT
GGTGACGGACAGTTGAAAGCTGAAGAAATTTATTTCTGGCGATGCACCTCACTGACATGGCC
AAAGCTGGACAGCCACTACCAGTACGCTTGGCTTCCGAGCTTGTCCCTCCATCTTTTCAGAG
GGGGAAGCAAGTTGATTTCTGTTAATCGAACTCTGCTTCATATCAGAAAACACAAGAAAG
AAGAGCCTCAGAAAGAACTGCCAGTTACTTTTGAAGACAAACGGAAAGCCAACTATGAAC
GAGGAAACATGGAGCTGGAGAAAGCCAGCCCAAGTGTGATGGAGCCAGCAGAGGGAG
GCTGAACCGCAAGGCCAGAAAGAGAAAGGAAGAGTGGGACCGGAACACAGAGAGAACTGC
AAGACCAAGAAATGGAAGAAAGCACTGAGTTGGAGAAACGCTTGGAGAAACAGAGAGAG
CTGGAGAGACAGCCGGAGGAAAGAGAGGAGAAAGGAGATAGAAAGACGAGAGGGCAGCAA
AACAGGAGCTTGACAGAGCAACGCTGTTAGCAATGGGAAAGACTCCCTCGGCAGGAGCTGC
TCAGTCAGAAAGACCCAGCGAAGCAAGACATTETCAGCCTGAGCTCCAGAAAGAAAAGT
CTCCACCTGCAACTGGAAGCACTGAAAGCAAAACATCAGCAGATCTCAGGCAGACTACAA
CATGTCCAAATCAGAAAGCAAAACAAAGACTGAGCTAGAAAGTTTGGATAAACAGTGT
GACCTGCAAAATATGGAATCAAAACAACCTTCAACAAAGCTTAAAGCAATATCAAAATAAG
CTTATCTATCTGCTGCTGCTGAGAAAGCAGCTATTAAACCAAGAAATTAAAAACATGCACTCA
GTAACACACCTGATTACGGCATCAGTTACTTCAATAAAAGTCAATGAAAAGGAAAGAAAT
TATGCCAAAGAGCTTAAAGCAACAAATAGATGCTCTTGAAGAAAGAACTGCACTAAAGCTCT
CAGAAATGCAATTCAATTAACCAATCAGCTGAAGGAACTCAGAGAAAGCTATAATACACAGC
AGTTAGCCCTTGAAGCACTTCAATAAATCAAAAGCTGACAAATTGAAGGAAATCGAAAGAA
AAAGATTAGAGCAAAAAA

FIG. 2A

ATGCCAGTQACATTCACCATCATGGGAACCACTTCCCTTTTCTTCAGGAATTCYCTGTAGTG
GAAGAGAGCACCCAGTGTGCTGAAAACATCTGAAAGTAGGGAGAAGAACCCTAAAAAT
AATCAGTATCTCAGAGGGCTCTAACGTGCCAAGAAAGTCTCACTGGACATTTAAGTGCCAA
CAAAGGCATACTTTCCGGAATCGCCAAAGTCAAAACTTTCTAACTTCTGTCTCTCTCAGAGAC
AAGTGAGACTCAAGAGTCTACTGCTTTAGTGGCAACTACAGAAAACTGGTGTTACCCAGA
AAAACAGGAGCAATTAGAAAATGGTTCCAATATTTCAAAGCTCCGCAACAGGATGTGCTT
TCCTTTGCCCATTTAGGGTTTCTCTCTTTTCTTTCTTTTATTAAACCACTA

FIG. 2B

ATATCTAGAAGTCTGGAGTGAGCAAAACAAGAGCAAGAAACAAAAGGAAGCCAAAAGCAG
AAGGCTCCAAATATGAACAAGATAAATCTATCTTCAAGACATATTAGAAGTTGGGAAAAT
AATTCATGTGAAGTACAGCAAGTGTGTTAAGAGTGATAAGTAAAAATGCACGTGGAGACAAG
TGCATCCCCAGATCTCAGGGACCTCCCCCTGCCTGTCACCTGGGGAGTGAGAGGACAGGAT
AGTGCATGTTCTTTGTCCTGAAATTTTAGTTATATGTGCTGTAATGTTGCTCTGAGGAAGC
CCCTGGAAAAGTCTATCCCAACATATCCACATCTTATATTCACAAATTAAGCTGTAGTATG
TACCCTAAGACCGCTGCTAAATGACTGCCACTTCGCAACTCAGGGGGCGCTGCATTTTAGTA
ATGGGTCAAATGATTCACTTTTATGATGCTTCCAAAGGTGCCCTTGGCTTCTCTTCCCACT
GACAAATGCCAAAGTTGAGAAAAATGATCATATTTTAGCATAAACAGAGCAAGTCGGCGA
CACCGATTTTATAAATAAACTGAGCACCTTCTTTTAAACAAACAAATGCCGGGTJTATTCT
CAGATGATGTTCAATCCGTGAATGGTCCAGGGAAGGAOCTTTCACCTTGACTATATGGCATT
ATGTCATCACAAGCTCTGAGGCTTCTCCTTTCCATCCTGCGTGACAGCTAAGACCTCAGT
TTTCAATAGCATCTAGAGCAGTGCGGACTCAGCTGGGGTGATTTCCCCCCCCATCTCCGGGG
GAATGCTCTGAAGACAATTTTGTACCTCAATGAGGGAGTGAGGAGGATACAGTGCTACT
ACCAACTAGTGGATAAAAGGCCAGGGATGCTGCTCAACCTCCTACCATGTACAGGACGTCTC
CCATTACAACCTACCCAATCCGAAGTGTCAACTGTGTCAGGACTAAGAAACCTGGTTTTG
AGTAGAAAAGGGCTGGAAAGAGGGGAGCCAACAAATCTGTCTGCTTCTCTCACATTAGTC
ATTGGCAAATAAGCATTCTGTCTCTTTGGCTGCTGCTCAGCACAGAGAGCCAGAACTCTA
TCGGGCACCAGGATAACATCTCTCACTGAACAGAGTTGACAAGCCCTATGGGAAATGCCCT
GATGGGATTATCTTCAGCTTGTGAGCTTCTAAGTTCTTTCCCTTCATTCTACCTTGCAAG
CCAAGTTCTGTAAGAGAAAATGCCCTCAGTTCTAGCTCAGGTTTCTTACTCTGAATTTAGATC
TCCAGACCTTCTGCTGCCACAAATTCAAATTAAGGCAACAAACATATACCTTCCATGAAGCA
CACACAGACTTTTGAAGCAAGGACAATGACTGCTTGAATGAGGGCTTGAGGAATGAAG
CTTTGAAGGAAAGAAATACTTTGTTCAGCCCTTCCACACTCTTCATGTGTTAACCAC
TGCTTCTCTGAGCTTGGAGCCACGGTGACTGTATTACATGTGTTATAGAAAACCTGATTTT
AGAGTTCTGATCGTTCAAGAGAAATGATTAAATATACATTTCTA

FIG. 2C

TCGAGCGGCGCGCCGGGOCAGGTCTTCAGACTGGACTGTGTCCACTGCCAGGCTTCCAG
GGCTCCAACTTGCAGACGGCTGTGTGGGACAGTCTGTGTAATCGCGAAAGCAACCATG
GAAGACCTGGGGGAAAACACCATGGTTTTATCCACCTGAGATCTTTGAACAACTTCATCT
CTCAGCGTGGGAGGGAGGCTCTGGACTGGATATTTCTACCTCGGCGCGACCAAGCT

FIG. 4

TACCGYGGTGGCGGCCGAGGYCTGCTTYTCTGTCCAGCCCAAGGCCCTGTGGGGTCAGGGC
GGTGGGTGCAGATGCCATCCACTCCGGTGGCTTCCCCATCTTTCTGTGGCCTGAGCAAGGT
CAGCCTGCAGCCAGAGTACAGAGGGGCCAACAAGTGGTGTCTTGAACAAGGGCCCTTAGCAG
GCCCTGAAGGRCCCTCTCTGTAGTGTGAACTTCCCTGGAGCCAGGCCACATGTTCTCCTCAT
ACCCAGGYTAGYCATGGTGAAGTTGAGGGTGAAATAGTATTMANGRAGATGGCTGGCA
RACCTCCCCGGCGGCCGCTCSAAATCC

FIG. 5

AGCGTGGTGCGCGCCGAGGTGTCTTCAGGGTCTGCTTATGOCCTTGTTCAAGAACACCAG
TGYCAGCTCTCTGTACTCTGGTTGCAOACTGACCTTGCTCAGGCCTGAGAAGGATGGGGCA
GCCACCAGAGTGGATGCTGTCTGCACCCATCGTCTGACCCCAAAAGCCTGGACTGGACA
GAGAGCGGCTGTACTGGAAAGCTGAGCCAGCTGACCCACGGCATCACTGAGCTGGGCCCCCT
ACACCCCTGGACAGGGACAGTCTCTATGTCAATGGTTTCACCCATCGGAGCTCTGTACCCAC
CACCAGCACCGGGGTGCTCAGCGAGGAGCCATTCAACCTGCCCGGGCGGCCGCTCGA

FIG. 6

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A

TTGGGGNTTTMGAGCGGCCCGCCCGGGCAGGTACCGGGGTGGTACGGGAGGAGCCATTAC
ACTGAACCTTCACCATCAACAACCTGGCGTATGAGGAGAAACATGCAGCACCCCTGGCTCCAG
GAAGTTCAACACCACGGAGAGGGTCTTCAGGGCCTGCTCAGGTCCCTGTTCAAGAGCAC
CAGTGTGGCCCTCTGTACTCTGGCTGCAGACTGACTTTGCTCAGACTTGAGAAACATGGG
GCACCCACTGGAGTGGAGCCCATCTGCACCCCTCCGCCTTGATCCCACTGGTCTGGACTGG
ACAGAGAGCGGCTATACTGGGAGCTGAGCCAGTCTCTGGCGGNGACNCNCTT

B

AGCGTGGTGGCGGCCGAGGTCCAGTCCAGCATGCTCTTTCTCCTGCCCCACTGSCACAGTG
AGGAAGATCTCTGCTGTCAGTGAGAAAGGCTGTTCATCCACTGAGATGGCACTCAAAAGTGC
ATTTAATACACCTAACGTAACGAACATCATAGCTTGGCCCCAGGTTATCTCATATGTGCTCA
GAACACTTACAAATAGCCCTGCAGACTCTCCCTCGGGCGGCCCGCTCGA

FIG. 7A and 7B

TGTGCTGTTGAACTTCCTGGAGNCAGGGTGACCCATGTCCTCCCCATACTGCAGGTTGGTG
ATGGTGAAGTTGAGGGTGAATGGTACCAGGACAGGGCCAGCAGCCATAATTGTSGRGCKG
SMOMSSGAGGMWGGWGTYYCWGAGGTTCTYRARRTCCACTGTGGAGGTCCCAGGACTGCT
GGTGGTGGGGACAGAGSTCYGATGGGTGAAACCAATTGACATAGAGACTGTTCTCTCCAG
GGTGTAGGGGGCCAGCTCTTYRA7GYCATGGYCAGTTKGCTYAGCTCCCAGTACAGCCRC
TCTCKGYYGMGWCCAGSGCTTTTGGGGTCAAGATGATGGATGCAGATGGCATCCACTCCA
GTGGCTGCTCCATCCTTCTCGGACCTGAGAGAGGTCACTCTGCAGCCAGAGTACAGAGGG
CCAACACTGGTGTTCCTTGAATA

FIG. 8

TCGAGCGGCGCGCGCGGCGGAGGTCAGGAAGCACATTGGTCTTAGAGCCACTGCCTCCTGGA
ITCCACCTGTGCTGCCGACATCTCCAGGGAGTGCGAGAAGGGAAGCAGGTCAAACCTGCTCA
GATCAGTCAGACTGGCTGTTCCTCAGTTCTCACCTCAGCAAGGTCACTCTGCAGCCAGAGTA
CAGAGGGCCAACACTGGTGTTCCTTGAACAAGGGCTTGAGCAGACCTGCGAGAACCCTCTTC
CGTGGTGTTGAACTTCCTGGAAACCAGGGTGTTGCATGTTTTCTCATAATGCAAGGTTG
GTGATGG

FIG. 9

FIG. 11

FIG. 13

Gene Name	Sal Probe 1 Exp Name	P1	P2	P3	Probe 2 Name	Gene ID	Probe1 Value	Probe2 Value	Probe1 E/B	Probe2 E/B	Probe1 A%	Probe2 A%
421001087 (1511)	120.2 360A Ovary Tumor				415A Aortic N	422X00011	5434	2740	36.3	2.3	50	50
421001087 (1511)	100.0 360A Ovary Tumor				550A Splenic Cord N	422X00028	5418	574	27.4	2.4	50	50
421001087 (1511)	60.1 400A Ovary Tumor				600A Ovary N	422X00044	1252	130	10.1	2.5	58	58
421001087 (1511)	50.7 400A Ovary T				591 Ovary Tissue	422X00047	9507	1608	45.8	2.1	45	45
421001087 (1511)	60.1 200A Ovary T				200A Ovary N	422X00046	5456	1245	34.1	2.0	50	50
421001087 (1511)	4.2 200A Ovary Tumor				475 Ovary N	422X00024	1845	478	11.9	2.0	48	48
421001087 (1511)	4.1 400A Ovary T				475 Ovary N	422X00040	489	1259	2.6	2.0	48	48
421001087 (1511)	4.1 300A Ovary Tumor				210 Splenic Cord N	422X00041	1714	1056	17.7	2.1	55	55
421001087 (1511)	1.5 210A Ovary Tumor				574 Ovary N	422X00041	4161	1210	21.0	1.0	62	62
421001087 (1511)	1.1 300A Ovary Tumor				574 Ovary N	422X00041	1365	627	8.8	2.1	47	47
421001087 (1511)	1.1 400A Ovary Tumor				574 Ovary N	422X00041	1365	1610	14.9	1.0	60	60
421001087 (1511)	1.1 400A Ovary Tumor				574 Ovary N	422X00041	1365	1360	11.1	1.1	41	41
421001087 (1511)	1.1 400A Ovary Tumor				574 Ovary N	422X00041	1365	1365	2.4	2.5	51	51
421001087 (1511)	1.1 400A Ovary Tumor				574 Ovary N	422X00041	1365	1365	4.2	2.0	47	47
421001087 (1511)	1.1 400A Ovary Tumor				574 Ovary N	422X00041	1365	1365	7.9	2.2	40	40
421001087 (1511)	1.1 400A Ovary Tumor				574 Ovary N	422X00041	1365	1365	10.4	2.0	50	50
421001087 (1511)	1.1 400A Ovary Tumor				574 Ovary N	422X00041	1365	1365	4.1	2.0	62	62
421001087 (1511)	1.1 400A Ovary Tumor				574 Ovary N	422X00041	1365	1365	2.7	1.9	78	78
421001087 (1511)	1.1 400A Ovary Tumor				574 Ovary N	422X00041	1365	1365	2.9	2.0	58	58
421001087 (1511)	1.1 400A Ovary Tumor				574 Ovary N	422X00041	1365	1365	4.2	2.1	58	58
421001087 (1511)	1.1 400A Ovary Tumor				574 Ovary N	422X00041	1365	1365	15.1	0.3	57	57
421001087 (1511)	1.1 400A Ovary Tumor				574 Ovary N	422X00041	1365	1365	12.5	1.7	38	38
421001087 (1511)	1.1 400A Ovary Tumor				574 Ovary N	422X00041	1365	1365	9.7	2.2	36	36
421001087 (1511)	1.1 400A Ovary Tumor				574 Ovary N	422X00041	1365	1365	2.2	2.2	41	41

FIG. 14

11731-1

ACGGTTTCAATGGACACTTTTATTGTTTACTTAATGGATCAATCAATTTTGTCTCACTACCTA
CAAAATGGAAATTCATCTTTGTTTCCATGCTGAGTAGTGAAACAGTGACAAAGCTAATCATAA
TAACCTACATCAAAAAGAGAACTAAGCTAAGCACTGCTCACTTTCTTTTAAACAGGCAAAATA
TAAATATAAGCACTCTAXAATGCACAATGGTTTAGTCACTAAAAAATTCAAAATGGGATCTT
GAAGAAATGTATGCCAAATCCAGCGTGCAGTGAAGATGAGCTGAGATGCTGTGCAACTGTTT
AAGGGTTCTGCGCACTGCACTCTCTTGGCCACTAGCTGAATCTTGACATGGAGGTTTITAGC
TAATGCCAAAGTGGAGATGCCAGAAAATGCTAAGTTGACTTAGGGGCTGTGCCACAGGAATA
AAAGGCAGGAAAGTACTAAATATTGCTGAGAGCATCCACCCAGGAAGGACTTTACCTTC
CAGGAGCTCCAAACTGGCAACCCAGTGGCTCACATGGCTGACTTTATCTCTCGTGTTC
CATTGGCACAGCAAGTGGCAGTG

11731-2

AAGGCTGGTGGGTTTGTATCCTGCTGGAGAACCTCCCTTTTCATGTGGAGGAAGAAGGG
AAGGGAAAAGATGCTTCTGCGAACAAGGTTAAAGCCGAGCCAGCCAAAATAGAAAGCTTTC
CGAGCTTCACTTTTCCAAGCTAGGGGAATGCTATGTCAATGATGCTTTTGGCACTGCTCACA
GAGCCACAGCTCCATGGTAGGAGTCAATCTGCCACAGAAAGGCTGGTGGGTTTGTATGA
AGAAGGAGCTGAATCTTGTCAAGGCTTGGAGAGCCAGAGCCAGCCCTTCTGCGCA
TCTTGGGCGGAGCTAAAGTTGCACACAAGAAGCAGCTCATCAATAATATGCTGGACAAAG
TCAATGAGATGATTATTGCTGGTGGAAAGGCTTTTACCTTCTTAAAGGCTGCTCAACAGCAT
GGAGATTGGCACTTCTCTCTTGTATGAAGAGCGGAGCCAAAGATTGTCAAGACCTAATGTCC
AAAGCTGAGAAAGATGGTGTGAAGATTACCTTCCCTGTTGACTTGTCACTGCTGACAAGT
TTGATGA

11731-3

TTGTTCTTACATTTTCTAAAGAGTTACTTAAATCAAGTCAACTGGTCTTTGAGACTCTTA
AGTCTGATTCCAAGTTAGCTAATCTAATCTGAGAACTGTGGTATAGGTGGCTGTCTCTTC
TAGCTGGGACAAAAGTCTTTGTTTCCCTGTAGAGTATCACAGACCTTCTGCTGAAGC
TGGACTCTCTCTGCGCTTGGACTCCCAATCTGCTTCTCATGTTCAAGCCTGGAAATGTT
AATCTTTAATCTTTCATATGGATGGAAATCTGTCTAAGTTGATCTTTAGAACACTGCAAT
TATCTTCTTGAATCTAATTTCTCTCTTCTTTGAAATCGCATCACTAAACTTCTCTCC
ATTCTTAGCTTCATCTATCACCTGTCTAGATCATCTCTGGAGGGAAGACATCTCTTAGTA
AAGGCTGCAAGCTGGGCTCACAGTACTGTCCAAGTTTCTCTGAAGTTCTGAACTTCTCTGT
CTTCTTCTTCAAGTAACCTGAATCTCTCTCAATCTCTCTTCCAAGTGGACTTTTCTCTG
GCAAAAGCATCCAG

11731-4

TCATTGCTCTGTGATGGCAATCTGGAATGTGATGAGCAGCCAGGAAGTTGTAGATTTCATTCA
ATCAAAAGGATTCAAGCATGTGCTGCAAGCTGTGAGGCAAGCAGAAACAAGAACTGTATGGCA
AGTTAAGAAGCACAGAGCCAAACAGGAGGACAGAAAGCAGTTGCGAGGAAGCTGAG
CAAGAAATGGAGGAATCAAGAAAGATGAGAAAGTTTCTAATCTAAACAGCAGAA
AATCTAGAGCTGGAAGAAAGAGAAATGAGGCTTGGGCAAGGCTGACCTTGCAGGAG
ATACAGCTAAAGAGTGTATGCAAAACACTTCTTTCTTCCAATGCCAGCATGAAGGAAGAAC
TTGAAAGGCTCAAAATGGAGTATGAAACCTTTCTAAGAAAGTTTCAAGTCTTTAATGTCTGA
GAAAGACTCTCTAAGTGAAGAGGTTCAAGATTAAAGCATCAGATAGAAAGGTAATGTATC
TAAACAAGCTAACTAGAGGCCAGCCAGAAAGATGATAACCAAGCAATGTCACTGAAGA
GGGAACACAGTCTATACCAGGT

FIG. 15A

11723.1.40.19.19

TACAAACTTTATTGAAACGGCACACGGCCACACACACAAACACCCCTGTGGATAGGGAAAA
 GCACCTGGCCACAGGGGTCCACTGAAACGGGGAGGGGATGGCAGCTTGTAAATGTGGCTTT
 GCCACAACCCCTTCTGACAGGGGAAGCCCTTAGATTGAGGCCCCACCTCCCATGGTGATGG
 GGAGCTCAGAAATGGGGTCCAGGGAGAAATTTGGTTAAGGGGGAGGTGCTAGGGAGGGCATGA
 GCAGAGGGCACCCCTCCGAGTGGGGTCCCGAGGGCTGCAGAGTCTTCAGTACTGTCCCTCAC
 AGCAGCTGTCTCAAGGCTGGGTCCCTCAAAAGGGGGCTCCAGCCGGGGGCCCTCCCTGGCC
 AAACACTTGGTACCCCTGGCTGGCCAGCGGAAGCCAGCAGGACAGCAGTGGCGCCGATCA
 GCACAACAGACGCCCTGGCGGTAGGGACAGCAGGCCCCAGCCCTGTGGGTGTCTGGGCAG
 CAGGTCTGGTTATCATGGCAGAAAGTGTCTTCCCACTTCACGTCTTCACACECACGTG
 AXGGCTACXGGCCAGGAAG

11723.2.40.19.19

CCCGTGGGTGCCATCCACGGAGTTGTTACCTGATCTTTGGAAGCAGGATCGCCCGTCTGCA
 CTGCACTGGAAGCCCTCGTGGGCAGCAGTGTGGCCATCCCCCGATGCCACGCCCTCTGGG
 AAGGGGCAGCAACTGGAAGTCCCTGAGACCGGTAAAGATGCAGGAGTGGCCCGCAGAGCA
 GTGGGCATCAACCTGGCAGCGGCCACCCAGATCCCTGCTCAGTGTGTGGGCCATTGTCTC
 AGAAGGGGACGGCAGCAGCTGTAGCTGTCTCCCTCCGGGGTCCAGGCACCAAGCCACAGGG
 CAGAACTGACCATCTGGCCACGGCTTCCAGCCACCAAGCCCTGTGTAAAGGCCACCCAGC
 TCACCAAGGCTCCACATGCTGTCTGCTCCCTCCGACTCCCGGTCTTGGGCCCTGATGGTTC
 TACCTGCTGTGAGCTGCCCACTGGGAAGTATGGCTGCTGCCAATGCCCAACGCCACCTGCT
 GCTCCGATCAGCTGCACTGCTGGGCCAAGACACTGTGTGTGACCTGATCCAGAGTAAAGTGC
 CTCTCCAAGGAGAAGC

11730-1

GAATCACCTTTCTGCTTAGCTACTTGTACAGAAACAATGAGGTTTCCACACAGCCGAG
 TCTCCCTGGGCTCTGTTTGGCTCTGGTAAGCCAGGCTTACACCTTTCTCTCTCTATCG
 AGAAGGGGAATATGCCATTAAAGGTGAAGAGTCACTTCCAAAAGTGAGAAAGGGATTGATT
 GCTGCTTCAGGACTGTGGAATTAATGGCAATGTTTACAAATGGTTGCTACAAAACAACA
 AAAAGGTAAATTACAAAATGTGTACATCACAAGATGCTTTTAAAGACATTATGCCATTGTCC
 TCACATTCCTTAAATGTTGTTTCCAAAGGTGCTCAGCTCTAGCCCAAGCTGGATTCTCCCG
 GAAAGGGCAGACAGATTTCCCAAAAAGACACAGGGAAGGAGGGGCTGTGAAAGGA
 GAAAGCAGGCTTCCAGTTAAAGATCAGGCTCAGTTAAAGGTACGCTTCCCGCAXGCTGGC
 CTCAXGCCGAGCTGTGGGTGAGAGGGAGGAGCAGCAACAGGCTGGGACTGGGGCT

11730-2

AACCGGAGCCCGAGCCAGTACCTGGCTGGGCACCATGGCTGGGATCACCAACCATCGAGCCG
 GTGAAGCCCAAGATCCAGCTTCTGCAGCAGCAGGCAGATGATCCAGAGGAGCGAGCTGA
 GCCCTCCAGCCAGAAATTCAGCGGAGAAAGCCGCGCCCGGGAACAGGCTGAGCCCTGAGG
 TCCCTCCTTGAACCGTAGGATCCAGCTGTTGAAAGAGAGCTGGACCGTCTCAAGGAGC
 GCTGGCCACTGCCCTGCAAAAAGCTGGAAAGCTGCAAAAAGCTGCTGATGAGAGTGA
 GAGGTATGAAGGTTATTCAAAAACCGCCCTTAAAGATGAAGAAAAGATGGAAGTCCAG
 GAAATCCAAGTCAAAAGAGCTAAGCAGATTCCAGAAAGAGGCAAGATAGGAAGTATGAAGA
 GGTGGCTGTAACTTGGTGTATCAATGAAGGAGACTTGGAAACGCACAGAGGAACGAGCTGA
 GCTGGCAGAGTCCCGTTCCCGAGAGATGGATGAGCAGATTAGACTGATGACCCAGAACCT
 GAAGTGTCTGAGTGC

FIG. 15C

11732.1contig

GAGAACTTGGCCCTTTATTGTGGGCCCAGGAGGGCACAAGGTCAGGAGGCCCAAGGGAGG
 GATCTGGTTTTCTGGATAGCCAGGTCATAGCATGGGTATCACTAGGAATCCGCTGTAGCTG
 CACAGGCCCTCACTTGTCTGCAGTTCCGGGGAGAAACACCTGCCACTCCATGGCGTTGATGACCT
 CGTGGTACACGACAGAGCCATTGGTGCACTGCCAAGGGCACGCCCATGGGCTCCGTCCTCG
 AGGGCAGGCAGCAGGAGCATTGGCTCTGCACATCCCTCGATGTCAATGGAGTACACAGCTT
 TGTGGCACACTTTCCCTGGCAGTAATGAATGTCCACTTCTCTTTGGGACTTACAAATCTCC
 ACTTTGATGTACTGCACCTTGGCTGTGATGTCTTTGCCATCAGGCTCCTCACATGTGTGACA
 GCAGGTGCCCTGGAAATTTTACGATTTTGGCTCCTTCAGCCAGACACTTGTGTTCATCAAAATG
 GTGGGCAGCCCGTGACCCCTCTCTCCCCAGATGTACTCTCCTCT

11732.2contig

GCCTGGACCTTGGCCGGATCAGTCCCACACACTGACTTGGTTGGCAAAATGGCCAGACCTTGC
 TGCAGAGTCATCGTGTCAATTGTGACCAATGGACCCCGGCTTCATGTGCCAACAGCCAGTC
 TCTGTTCGGGTGGAGGAGAGCGTGTGGCTCCCGCTGGACCTGCCCTTGTGTGTGCACGGGGC
 AGTTCCACTCGGCACATCGTCACTTCGATGGGCAGAAATTCAGGCTTACTGCTAGCTGCT
 CCTATGTCTATCTTTCAAAAACAAGGACCCAGGACCTGGAAAGTGTCTCTCCACAATGGGGCCTG
 CAGCCCCCGGGCAAAACAAGCCTGCATCAAGTCCATTGAGATTAAAGCATGCTGGCGTCTC
 TGCTGAGCTGCACAGTAACATGGAGATGGAGTGGATGGGAGACTGGTCTTGGCCCGTA
 CGTTGGTCAAAAACATGGAAAGTCAGCATCTACCGCGCTATCATGTAAGAACTCAGGTTTACC
 CATCTTGGCCACATCCTCACAATACACCCGCKCAAAACAAGCAGTT

11735-1-2

AGATCAACCTCTGCTGCTCAGGAGCAATCCCTTCCCTTGTCTTGGATCTTTGCTTTGACCTTC
 TCGATAGTRWCAACCTKNRYTFRAMSKQHAAGKGYRATGRWNITKSYWOWRASYNTHWWM
 RSGRARAYTTAGCAYCCCMCTCWZAGCGSAGKACCFARGTCCAGAGGTGGACTCTTTCTG
 GATGTTGTAGTCAAGACAGGGTCCCTCATCTTCCAGCTGTTTCCACCAAAAGATCAACCTC
 TCTGATCAGGACGGATGGCTTCTTATCTTGGATCTTTGCTTGCATTTCTGATGCTGCTC
 ACTGGGCTCCACCTCCAGGGTATCTCTTACCAGTCAAGGCTCTTACCGAAGATYTGCATC
 CCACCTCTGAGACCGAGCCAGGCTGACGGCTGACTCTTTCTGGATGTTGTAGTCAGACA
 GGCTGCGYCCATCTTCCAGCTGCTTCCGGAAGATCAACCTCTGCTGCTCAGGAGGRAT
 GCCTTCCCTTCTCTGATCTTTGGCTGACCTCTCTATGCTGCTCCTCGGCTCCACTTCCA
 GACTGATGCTCTTACCAGTCAAGGCTCTTACCGAAGATCTGCAATCCACCTCTAA

11740.2.contig

AACTCACAACACAGACAAGATTATTACAGCTCCAGCTATAATTAGAAAGCTGAACGAAGA
 GACAGAGCTCATGATTTCTGAGATGATTCAGAGCTTAAAGCTCGAATTACATCTTTACAAG
 AGGAGGTGAAGCATCTCAACATAATCTCGAAAAGTGGAAAGGAGCAAAAGAAAAGAGGCT
 CAAGACATGCTTAATCACTCAGAAAGCGAAGAAAGATAATTTAGACATAGATTTAAACTAC
 AAACCTTAAATCATTACAACAAGGGTTAGAACAAAGAGGTAAATGAACACAAGTAACCAAA
 GCTCGTTTAACTCAGAAACATGPAATCTATTGAAGAGGGCAAGCTCTGTGGCAATGTGTGAG
 ATGCAAAAAGAGCTGAAGAGAAAGAAAGCAACTCGAGAGAAAGCTGAAAATCCGGTTGT
 TTAGATTGAGAAACAGTGTTCATGCTACAGCTTGATCTGAAGCAATCTCAGCAGAACT
 AGAACAATTTGACTCGAATAAAGAAAGGATGGAAGATCAAGTTAAGCAATCTA

FIG. 15D

11765.2&64.1.contig

CGCCTCCACCATGTCCATCAGGGTGACCCAGAAAGTCCACAAAGGTGTCCACCTCTGGCCCC
 CGGGCCTTCAACAGCCGCTCTACAGGAGTGGCCCCGGTTCCCGCATEAGCTCCTCGAGCT
 TCTCCCGAGTGGGAGCAGCAACTTTCCGGGTGGCTGGGGCGCGGCTATGGTGGGGCCA
 GCGGCATGGGAGGCATCACCCAGTTACGGTCAACCAGAGCCTGCTGAGCCCCCTTGTCTCT
 GGAGGTGGACCCCAACATCCAGGGCGTGGCCACCCAGGAGAAGGAACAGATCAAGACCTT
 CAACAACAAGTTTGGCTCTTCAIAGACAAGGTACGGTTCTGGAGCAACAGACAAGAT
 GCTGGAGACCAAGTGGAGCCTCTCCAGCAGCAGAAAGACGGCTCGAAGCAACATGGACA
 ACATGTTCCGAGAGCTACATCAACACCTTAGGGCGGAGCTGGAGACTCTGGGCCAGGAGA
 AGCTGAAGCTGGAGGGGAGCTTGGCAACATCCAGGGGCTGGTGGAGGACTTCAAGAAC
 AAGTATGAGGATGAGATCAATAAGCGTACAGAGATGGAGAACGAATTTGTCTCATCAAG
 AAGGATGTGGATGAAGCTTACATGAACAAGGTAGAGCTGGAGTCTCCCTGGAAGGGCTG
 ACCGACGAGATCAACTTCTCAGGCAGCTGTATGAAGAGGAGATCCGGGAGCTGCCAGTCC
 CAGATCTCGGACACATCTGTGTCTGTCTTCCATGGACAACAGCCGCTCCCTGGACATGGACA
 GCATCATTTGCTGAGGTCAAGGCACAGTACGAGGATATTGCCAACCCGAGCCGGGCTGAGG
 CTGAGAGCATGTACCAGGTCAAGTATGAGGAGCTGCAGAGCCTGGCTGGGAAGCACGGGG
 ATGACCTGGGGCGCACAAAGACTGAGATCTCTGAGATGAACCCGGAACATCAGCCCGGCT
 XCAGGCTGAGATTGAGGGGCTCAAAAGGCCAGAXGGCTTXCCTGGAXGXCCGCCAT

11767.1.contig

CCCGGAGCCACCCAAAGGAGCGGAAATGGCAGACAAATTTTCCCTCCATGATGGCTTATCT
 GGGTCTGCAAAACCCAAACCTCAAGGATGGCCTGGCCATGGGGAAACCAAGCTGTCTGG
 CCAGGGGGCTACCCAGGGGCTTCTATCTCTGGGGCTACCCCGGGCAGGCACCCCGAGGG
 GCTTATCTCTGGACAGGCACCTCCAGGCCTTACCCTGGAGCAGCTGGAGCTTATCCCGGAG
 CAGCTGCACCTGGAGTCTACCCAGGGGACCCAGGGGCTGGGGCTAGCCATCTTCTGG
 ACAGCCAAAGTCCCACCCGAGCCTACCTCTCCCACTGGCCCTATGGCGCCCTCTCTGGGCA
 CTGATTTGTCTTATAAGCTGCTTGGCTGGGGAGTGGTGGCTCCCATGCTGATAACAA
 TTCTGGGACGGGTGAAGCCCAATCCAAACAGAAATCTCTTAGATTTCCAAAGAGGGGAATG
 ATGTTCCCTCCACTTTAACCCAGCTTCAATGAGAACAAACAGGACAGTCAATGCTTGC
 TACAAAGCTGCATAA

11768-1&2

GGCAATGCCAACAACTTTATTGAAGGAAAGTGCATGAATTTGTTGAAACCTTAAAAAG
 GGAAACTTAGACACCCCGCTCRA₂CGMACKACCAAGTGCARA₂GTGGACTCTTTCTGGAT
 GTTGTAGTCAGACAGGGTGGWCCATCTTCCAGCTGTTTYCCRGCAAGATCAACCTCTGC
 TGATCAGGAGGATGGCTTCTTATCTTGGATCTTTGGCTTGACATTCTCGATGGTGTCACT
 GGGCTCCACCTCGAGGGGTGATGGCTTACAGTCAGGGTCTTCAAGAAATYTGCATCCCA
 CCTCTGAGACGGAGCACCAGGTCCAGGGTCACTCTTTCTGGATTTGTAGTCAAGACAGG
 GTGGGYCCATCTTCCAGCTGCTTCCS₂CCAAAGATCAACCTCTGCTGGTCAGGAGGATGC
 CTTCCTTCTCTGATCTTTTCCTTGGCTTCTCAATGGTGTCACTGGCTCCACTTCCAGAG
 GTGATGCTCTTACCACTCAGGGTCTTCCAGAGATCTGCATCCCACTCTAAGACGGAGCA
 CCAGGTGCAGGGTGGACTCTTTCTGATG₂TTGTAGTCAGACAGGCTGCTCCATCTTCCA
 GCTGTTTCCAGCAAAAGATCAACCT

FIG. 15E

11768-1&2-11755-1&2

AGGTTGATCTTTGCTGGGAAACACCTGGAAAGATGGACCCACCTGTCTGACTACAAACATC
 CAGAAAAGAGTECACCTGCACCTGGTGGCTCCGTCTTAGAGGTGGGATGCAGATCTTCGTGA
 AGACCTGACTGGTAAGACCATCACTCTCGAAGTGGAGCCGAGTGACACCATTGAGAAYG
 TCAARGCAAAGATCCARGACAAGGAAGGCATYCCCTCTGACCAGCAGAGCTTGATCTTTG
 CCGGAAAACAGCTGGAAAGATGGRCGCCACCTGTCTGACTACAACATCCAGAAAGAGTCYA
 CCTGACCTGGTGGCTCCGTCTCAGAGGTGGGATGCCARATCTTCGTGAAGACCTGACTGG
 TAAGACCATCACCTCGAGGTGGAGCCCACTGACACCATEGAGAATGTCAAGGCCAAAGAT
 CCAAGATAAGGAAGGCATCCCTCTGATCAGCAGAGGTGATCTTTGCTGGGAAACAGCT
 GGAAGATGGAGCCACCTGTCTGACTACAACATCCAGAAAGAGTCCACCTYTGACACTGGT
 MCTBCCTYAGAGGKGGGRYGGAACTCTWMTGWagCaCICCTKKYAAGRYYTCAMCMWt
 BAKKTCgAKYSCASTKWCCTWTCRAKAAAMGTYRWWGCAWagTCCMAGACAAGGAAGGC
 ATTCCTCTGACCAGCAGAGGTTGATCT

11769.1.contig

ATGGAGTCTCACTCTCTGCGACCAGGCTGGAGCCCTGTGGTGGGATATCGGCTCACTGCCAGT
 CTCCACTTCCTGGGTTCAAGCGATCCTCTGCGCTCAGCCTCCCGAGTAGCTGGGACTACAG
 GCAAGCGTCACCATAATTTTGTATTTTGTAGTACAGACATGGTTTCGCCATGTTGGCTGGG
 CTGGTCTCGAAGTCTCTCAGCTCAAGTGCATCTGTCTGGCTCCCAAGTGTGGGATTACA
 GCGGAAAGCCAAAGCTCCCCGCCAGCCAAACAACCTTAGAATGAAGGAAATATGCCAAAG
 AACATCACATCAAGGATCAATTAATTACCATCTATTAATTACTATAATGTGGCTAATTATGA
 CTATTTCCCAAGCAATCTACCTGACTGCTTGAGAAGATGTTTGTCTGCAATGGTGGAGAG
 TGGAGAAGGCCCAGGATTCTTAGCTT

11769.2.contig

AGCGCGGTCTTCCCGCCCGAGAAAGCTGAAGGTGATGTGGCCGCCCTCAACCGACCGCATC
 CAGCTCGTTGAGGAGCCAGTTGCAACAGGCTCAAGAACGACTGGCCACGGCCCTGCAGAAAG
 CTGGAGGAGCCAGAAAAGCTGCAAGATGAGAGTGGAGAGGAAATCAAGGTGATAGAAA
 CCGGCCCCATGAAGGATGAGGAGAAAGATGAGATTCAGGAGATGCAGCTCAAGAGGCCA
 AGCAGATTCCGGAAGACCCCTGACCCCAATACGAGGAGGTAGCTCCTAAGCTGCTCAATC
 TGGAGGGTGAGCTGGAGAGCCGACAGGAGCCCTGCGGAGGTGTCTGAACTAAAATGTGGT
 GACCTGGAAGAAAGAACTCAAGAAATCTTACTAACAAATCTGAAATCTCTGGAGCCTGCATCT
 GAAAAGTATTCTGAAAAGGAGGACAAATATGAAGAAAGAAATTAATTTCTGTCTGACAAA
 CTGAAGAGACCCCTGAGACCCCTGCTCAATTTCCAGAGAGAACCGTTGCAAAACTGGAAAAG
 ACAATTGATGACCTGGAAGAGAACTTCCCCAGC

11770.1.contig

GTGCACAGCTCCCATTTATTTGTAGAAATATAAATTAATTACAGTGAATAAGCTCTTCTT
 AAAATTACAAAACAGAAAACCAAAAGAGGAAGAGGAAAAACCCCAAGGACTTCCAAGGGT
 GAAGCTGTCCCTCTCTCTGCAACCTTCCAGGCTCATTAAGTGTCTTGGAAAGGGGACAGA
 GGAATCAGAGGGGATCACTCTCCAGCCGCCCCCTGGGCTCAAGCCGCTGAGGCAAGAGATCC
 TGAGGCCACAGAGCTCCGCAACCTGAGCCGCTCTCTGCCCCCTCCCCCACTGCCCCA
 AACCTGTTTACAGACCTTCCCCCTCTCTCTAAACCCCTCCATCCACTCTGCACTTCCCCA
 GGCAGGTGGGTGGGCCAGCCCTCAGCTACTCTCTGCGGCGCGGTTTCGGTCAAGCAAGGC
 ACACTCCCAGAGGTGATATCAAGGCTT

FIG. 15F

11770.2.contig

GCAAGGAACTGGTCTGCTCACACTTGCTGGCTTGGCCATCAGGACTGGCTTTATCTCCTGA
 CTCACGGTGCAAAAGGTGCACTCTGCGAACGTTAAGTCCGTCCCAAGCGCTTGGAAATCCTAC
 GGGCCCCACAGCCGGATCCCCTCAGGCTTCAGGTCTCAACTCCCGTGGACGGCTGAACAA
 TGGCCTCCATGGGGCTACAGCTAATGGGCATCCCGCTGGCCGTCTGGGGCTGGCTGGCCGT
 CATGCTGTGCTGGCCGCTGCCCATGTGGCGCGTGACGGCCTTCATCGGCAGCAACATTGTC
 ACCTGGCAGACCATCTGGGAGGGCCTATGGATGAACTGCGTGGTGCCAGAGCACCGGCCAG
 ATGCACTGCAAGGTGTACGACTGCGTGTGGCACTGCCCGCAGGACCTGCAGGCGGGCCCG
 GCGCTGCTCATCATCA

11773.1.contig

TGCAAAAGGGACACAGGGGTTCAAAAATAAAAATTCTCTTCCCGCTCCCCAAACCTGTAC
 CCCAGCTCCCCGACCACAACCCCCCTTCTCTCCCCGGGAAAGCAAGAAGGAGCAAGTGTG
 GCATCTGCAGCTGGGAAGAGAGAGAGCGCCGGGAGGGTGGCGAGCTGGTGTCTCTCTTTC
 CAAATATAAATACXGTGTGTCAAACTGGAAAATCTCCAGCACCCAGCACCCCAAGCACTCT
 CCGTTTTCTGCCGGTGTGTTGGAGAGGGGGGGGGGGGCAAGGGCCCGCAGGCACCGGGCTGCT
 GCGGTCTACTGCATCCCGCTGGGTGTGCAACCCCGGAGCCTCTCTCTCTCATTTGTAGAAQA
 GATGACACTCGGGGTGCCCCCGGATGGTGGGGGTCTCTGGATCAGCTTCCCGGTGTGGG
 GTTCACACACCAGCACTCCCCAGCGTGGCGCTTCAGAGACATCTTGCACGTGTTGAGGTTG
 TACAGGCCATGCTTGTACAGTTC

11778.1.contig

GGGTGGAGGGAGCTGCTCTTTATTTCAAAAGACACTTGTCATATTCACTATCAAAAACA
 GTTCACTATTGATTTCTCTTTCTCCCAATCCGCCCCAAAGAGAGCTACATAAAAAGGAGAGT
 ACATTTTAAGGCAATAAGCTGCAAGCATGTACACCTAACAGACCTCTAGAAACCTTACCAG
 AAAATGGGGACTGGGTAGGGAGGGAAACTTAAAGATCAACAAACTGGCAGCCCAACCGA
 CTGCAAGCCCTGTACAGCCAGATGGCGTGGCCAGCGTGGCACAAGGCCAAAGCAAAAGT
 TCAAAATAATATAAAATTTAAAGGTTTGTACATAAGCTATTCAAGATTTCTCCAGCACT
 GACTGATACAAAGCAGATTGAGATGGCACTTCTAGAGACAGCACTTCAAAACCCAGAA
 AGCGTGATGAGATGAGTTTACATGGCTAAATCAAGTGGCAAAAACACAGTCTTTCTTTCTT
 CTTTCTTTTCAAGGAGCCAGCAAGCAATTAAGTGTCACTCAACATAAGGGGGCAGATGA
 TCCATTTCTGTACCAGTTGTGAACGGC

11778-1&30-1

CAQGAACCGGAGCCGCCAGCACTAGCTGGCTGGGACCAAGCGTGGGATCACCACCATCBA
 GCGGGTGAAAGCGCAAGATCCAGGTTCTGACGACGAGGAGATGATGCAAGAGGAGGCGAG
 CTGAGCGCCCTCCAGCGAGAAATGAGCGAGAAAGCGCGCGCGCGGCAACAGGCTGAGCGT
 GAGGTGGCTCTCTGAAACCGTAGGATCCAGCTGGTTGAAAGAGAGCTGGACCGTGTCTGAG
 GAGCGCTGCGCACTGCGCTGCAAAAGCTGGAAGAACTGAAAAAGCTGCTGATGAGAGT
 GAGAGAGCTATGAACGTTATTGAAAACCGCGGCTTAAACATGAAAGAAAGATGGAACT
 CCAGGAAATCCAACTCAAAAGAAAGCTAAGCACATTCCAGAAAGAGGACAGATAGGAAGTATG
 AAGAGGTGGCTGCTAAGTTGGTGATCAATGAAGGAGCTTGAAGCGACAGAGGAACGAG
 CTGAGCTGCGCAGAGTCCCGTTGCCGAGAGATGGATGAGCAGATTACACTGATGGACCAG
 ACGTGAAGTGTCTGAGTTC

FIG. 15G

11782.1.contig

ATCTACGTCATCAATCAGGCTGGAGACACCATGTTCAATCGAGCTAAGCTGCTCAATATTG
 GCTTTCAAGAGGGCTTGAAGGACTATGATTACAACCTGCTTTGTGTTCACTGATGTGGACCT
 CATTCGGATGGACGACCGTAAATGCTACAGGTGTTTTCCGAGCCACGGCACATTTCTGTT
 GCAATGGAGCAAGTTCCGGTTTAGCCTGCCATATGTTCACTATTTTGGAGGTGTCTCTGCTCT
 CAGTAAACAACAGTTTCTTCCCATCAATGGATTCCCTAATAATTATTGGGGTTGGGGAGGA
 GAAGATGACGACATTTTAAACAGATTAGTTTCATAAAGGCAATGCTATATCAGCTCCAAATG
 CTGTAGTAGGGAGGTGTGGAATGATCCGGCATTCAAGAGACAAGAAAATGAGCCCAATC
 CTCAGAGGTTTACCCGATCCGACATACAAAGGAAACGATCCGCTTCGATGGTTTGAACCT
 CACTTACCTACAAGGTGTTGGATGTCAGAGATACCCGTTATATACCCAAATCAC

11782.2.contig

CTAGACCTCTAATTAAGGACACAATCATGCTGGAGAATGAACAGTCTGACCCCGAGGGC
 CACAGCGAATTTTACGGGAAGGAGGCAAGAGGTGAGAAGGGAAAGGAAAGGAAGG
 AAGGAGAAACAATAAGAACTGGAGACGTTGGGTGGGTGAGGAGTGTGGTGGAGGGCTGG
 AGAGATGGTAAACAAACCTGACTGCTATGAGTTTTCAACCCCTATAGTCTAAGGCCATGAG
 GGCCTCAGTTCTTGGTGGCTGAGCGCTTCCACCCAGCCACCTGGGGAGTGGAGTGG
 GGAATCTGCCAGGTAAAGCAGATGTTGCTCTCCAAAGTTCTGACCCAGATGCTCTGCCAGGA
 TAACCGTGACCTGTTCCCTCAACAAGGGACCTGAAAGTAATTTTCTCTTTAC

11783-1 & 2

CCGAATTCAAGCGTCAACGATCCCTTACCATCAAAATCAATTGGCCACCAATGGTACT
 GAACCTACGACTACACCGACTAGCGCGGACTAATCTTCAACTCTCTACATCTTCCCCCAT
 TATTCCCTAGAACCCAGGGGACCTGCGACTCCTTCACCTTGACAAATCGAGTACTACTCCCGAT
 TGAAGCCCCCATTCGTATAATAATTACATCACAAGACGCTCTTGCCTCATGAGGTGTCCCG
 ACATAGCGCTTAAAAACAGATGCAATCCCGGACGTCTAAGCCAAACCACTTTACCGGTA
 CACGACCGGGGGTATACTACCGGTCAATGCTCTGAAAATCTGTGAGGCAAAACCACAGTTTCAT
 GGGCATCGTCTAGAAATTAATCCCGTAAAAATCTTTGAAAATAGGGCCCGTATTTACCTA
 TAGCACCCCTCTACCCCTCTAG

11786.1.contig

GCTCTTCACACTTTTATTGTTAATCTCTTCACATGGCAGATACAGAGCTGTCTGTTGAAG
 ACCAGCACTGACCAGGAAATGCCACTTTACAAAATCATCCCCCTTTTCATGATTGGAAC
 AGTTTCTGACCGCTCTGGGAGCGTTCAAGCGTGACCAGCACATTTGCACATGCAAAAAA
 GGAGTGACCCCAAGCCCTCAACACACTTCCCAAGGCTCAGCAATGGGCTGCAGGTGACTT
 GCCAGGTTTGGCGTTCTGTAGCTTTCCTTCTGCTCCGCTGGGAGGCCCTCAAGCACTGA
 GAGCCCGGGGTATGCTTTCATGAGTGTAAACATTTACGGCACAAAAGCCCATCATTAGGAT
 AAGCAACAGCCACAGCACTTCATGCTTCTGAGGCTTACCTGTAGGAGCGGCTGAAAAGGAT
 TCCAATTTATGAAAATTAAGCAACAACGGCTTTTACCTGGGTGGGAAACAGGAAAC
 TGTGATGTGGGCCAATGACCACCAATTTTCTGCCCATGTGAAGCTCCCATGAAACC

FIG. 15H

11786.2.contig

CAAGCGCTTGGCGTTTGGACCCAGTTCAGTCAAGGTTCTTGGGTTTTGTCCCTTTGGGGATTT
 TGGTTTGACCCAGGGGTCAGCCTTAGGAAGGTCTTCAGGAGGAGGCCGAGTTCCCTTCAG
 TACCACCCCTCTCTCCCCACTTTCCTCTCCCCGGCAACATCTCTGGGAATCAACAGCATATT
 GACACGTTGGAGCCGAGCCTGAACATGCCCTTCGCCCCAGCACATGGAAAAACCCCTTC
 CTTCCTTAAGGTGTGTGAGTTTCTGGCTGTGTGAGGCAATTCAGACTTGAAAATCTCATCAG
 TCCAATTGCTCTTGAGTCTTTGCAGAGAACCCTCAGATCAGGTGCACCTGGGAGAAAAGACTTT
 GTCCCCACTTACAGATCTATCTCTCTCCCTTGGGAAGGGCAGGCAATGGGGACGGTGTATGG
 AGGGGAAGGGAATCTCTCTGGCCCTTCATTGCCACACTTGGTGGGACCATGAACATCTTTAG
 TGTCTGAGCTTCTCAAATTACTGCAATAGGA

13691.1&2

AGCGTCAAATCAGAATGGAAAAAGACTCAAATCCATCATCAACACCAAGATCAAAAGGAC
 AAGRATCCTTCAAGAAACAGGAATAAACTCCTAAACACCAAAAGGACCTAGTTCTGTAG
 AAGACATTAAAGCAAAAATGCCAAGCAAGTATAGAAAAAGGTGGTTCTCTTCCCAAAGTGG
 AAGCCAAATTCAATTAATGTGAAGAAATTCCTCCGATGACTGACCAAGAGGCTATTCA
 AGATCTCTGOCAGTGGAGGAAGTCTCTTTAAGAAAAATAGTTTAAACAAATTTGTTAAAAAT
 TTTCCTCTTATTTCAATTTCTGTAAACAGTGTATCTGGCTGTCTTTTATAATGCCAGT
 GAGAACTTTCCTACCGTGTGTGATAAATGTGTCTCAGGTTCTATTGCCAAGAAATGTGTGT
 CCAAAAATCCCTGTTTAGTTTAAAGATCCAACTCCACCCCTTGGCTTGGTTTAAAGTATGT
 TGGAAATTTATGATAGGACATACTAGTACCGGTGGTCAGACATGGAAATGGTGGGSMGAC
 AAAAAATATACATGTGAATAA

13692.1&2

TCCGAATTCGAAGCGAATTATGACAAAGGATTCCTTTAGAGGATTACTTTTTCAATTTG
 GTTTTAGTAATCTACGGTTTCCTTGTAAAGCAATACAACCATGGATTTTAAATACTGTTTG
 TGGAAATGTGTTAAAGCAATGATCTAGAACCTTTGTATATTGATAGTATTTCTAAGTTTC
 ATTCTTTAGTTTTCAGTTAAATGTTCAATCTCTGCTATGCCAATCGTTTATATGCCAGTTTC
 TTTAATTTTTTAGATTTTCTGATGTATAGTTTAAAGCAACAAAGTCTATTTAAAGCTG
 TAGCACTAGTTTACACTTCTAGCAAGAGCAAGGTTGTGGGTTAAACTTTGTATTTCTT
 TCTTATAGAGGCTTCTAAAAAGGTAATTTATATGTCTTTTAAACAAATATGTGTACAAAC
 CTTTAAACATCAAATGTTTGGATCAAACAAAGACCCAGCTTATTTTCTGC

13693.2

TGTGCTGGCCCGGCTGAGGTGGAGGCCAGGACTCTGACCCCTGCCCTTCAGCAA
 GGCCCCCGGACGGCCCGGCTACTACCAACTCCGTTGGTGAATAATATAGGCCAGTAAA
 GCTCAATGAATTTGTGGGAATGAAGACACCGTGACCAAGGCTAGAGGTCTTTGCAAGGGA
 AGGAAATGTGCCCAACATCATATTCGGGGGCTCCAGGAACGGGCAACAGCACAAGCAT
 TGTGTGCTTGGCCCCGGGCGCTCTGGCCCCAGCACTCAAGATGCCATGTTGGAACTCAAT
 GCTTCAAATGACAGGGGCCATTGACOTTGTGAGGAATAAAATTAATGTTTCTCAACAA
 AAGTCACTCTTCCCAAAGCCCGACATAAGATCATCATCTGGATGAAGCAGACAGCATC
 ACCGAGGGAGCCCAAGCAAGCCTTGAGGAGAACCATGGAAATCTACTCTAAAACCACTGCT
 TCGCCCTTCTTGTAAATGCTTCCGATAAGATCATGAGCC

FIG. 15I

13696.1-13744.1

CTTTSCAAAGCTTTTATTTTCATGTCTGEGGCA TGGAAATCCACCTGCACATGGCATCTTAGCT
GTGAAGGAGAAAGCAGTGCACGAGAAGGAATGAGTGGGCGGAACCAACGGCTCCACAA
GCTGCCCTCCAGCAGCCTGCCAAGGCCATGGCAGAGAGAGACTGCCAAACAAACACAAGCA
AACAGAGTCTCTTCACAGCTGGAGTCTGAAAAGCTCATAGTGGCATGTGTGAATCTGACAA
AATTAAAAAGTGTGCATAGTCCATTACATGCCATAAAACAETAATAATAATCTGTTTACAGG
TGACTGCAGCAGGCAGGTCCAGCTCCACCCTGCCCTCCTGCCACATCACATCAAGTGGCA
TGGTTTAGAGGGTTTTTTCATAITGTAAATTCITTTATTCTGTAAAAGGTAACAAAATATACAG
AACAAAACITTTCCCTTTTTTAAACTAATGTTACAAATCTGTATTATCACTTGGATATAAAT
AGTATAIAAGCTGATC

13700.1

CAAGGGATATAITGTTGAGGGTACRGRGTGA²ACTGAACAGATCACAAAGCAGGAGAAACA
TTAGTTCTCTCCCTCCCCAGCCTCTCCTTCCTCTCCCTGGTTTTCCGATGTCCACAGAGTGA
GATTGTCCCTAAGTAACTGCATGATCAGAGTGTCTGKCTTTATAAGACTCTTCATTACAGCCT
ATCCAATTCAGCAATTGCTTCATCAAAATGCCCTTTTGGCAGGCTACAGGGCTTTTCAGGA
GAGTTTAGAATCTCATAGTAA³AAAGACTCAGAAATTAAGTCCAGACCAAGACGAATTGGG
TGTGTAGGCTGCATTNCTTTCTTACTAA⁴TTTCAAAATGCTTCCTGTAAAGCTCTCTGGAGTT
CGACACAAAGTGGTTTGTGTTGCTCCAGATGCCACTTCAGAAAGATACCTAAATAATCT
CTTTTCATTTTCAAACTAGAACAC

13700.2

TCCGAGCCGGGCTAGTCCGCGCGCGCGCGCGCGGGTGCAGCCACTGCAGGCACGGCTGCC
GCGGCTGAGTATGCGCTTAGCAAGCAAGCAGGTGATCTCGCTCGGAGCTTCGCTCGGAA
GGGTCTTTGTTCCCTCCAGCCCTCCCAAGGGAATGACAATGGATAAAAGTGAAGCTGGTACA
GAAAGCCAAACTCGCTGAGCAGGCTGAGCCATATGATGATATGGCTGCAGCCATGAAGGC
AGTCACAGAAACAGGGGCATGAACCTCTCCAAAGGAAGAGAGAAATCTGCTCTCTGTTGCCA
CAAGAAATGTGCTAAGGCGCGCGCGCGCTCTTCTGCGCTGTGATCTCCAGCAATTGAGCAGA
AAAGCAGAGAGGAATGAGAAACAGCAGCAATCGGCAAAAGTACCGGTGAGAAAGATAGA
GCCAGAACTGCAGGACATCTCCAAATGATGTTCTGACGCTTGTTGACAAATATCTTATTC
AATGCTACACAACCCGAGAAA

13701.1

AAAAAGCAGCAGTTGAACACAAAATAGAAATGTCAAATGTAGGATAGAACAAAACCAA
GTGTGTGACGGGGGAACCAACACCAAAAGGAAGAAATGACATCTTCCAAAAAGATGGA
GGAGGGTTCCCTCTCTCTGTGGGACTGACTCAACACTGATGTGGCAGTATACACCATTC
CAGACTCAGGGGTGTTCA⁵TTCTTTTCCGAGTAAOAAAAGGTGGGGATTAAACAAGAGCT
TTCTGAGGCTTAGGGACCAAGGCTGCTTTCTTTCCGCGCTCCCAACCCCTTGATCCCTTT
CTCTGATCAGCGGAAAGGAGCTCGAATGAGGAGCTAGAGTTGGAAGGGGAAAGGATT
CACTTGACAGAATGGGACAGACTCCTTCCCA

FIG. 15J

13701.2

TGGCAATAGCACAGGCATCCAGGAGCTCTTCARGCGCATCTCGGAGCAGTTCACTGCCATG
TTCCGCCGGGAAGGCCTTCCCTCCACTGGTACACAGGCGAGGGCATGGACGAGATGGAGTTT
ACCGAGCGCTGAGAGCAACATGAACGACCTCGTCTCTGAGTATCAAGCAGTACCAGGATGC
CACCGCAGAABAGGAGGAGGATTTCCGTGAGGAGGCCGAABAGGAGGCGCTAAAGCCAGAG
CCCCCATCAGCTCAGGCTTCTCAGTTCCCTTAGCCGTCTTACTCAACTGCCCTTTCTCTCC
CTCAGAAATTTGTGTTTGCTGCGCTCTATCTTGTTTTTGTGTTTTTCTCTGGGGGGTCTAGAA
CAGTGCCTGGCACATAGTAGGCGCTCAATAAATACTTGGTTONTGAATGTCTCT

13702.3

AGCTGGCGCTAGGGCTCGGTTGTGAAATACAGCGTGTACAGCCCTTGGCGCTCAGTGTAGAA
ACCCACGCGCTGTAAGGTGGGTCTTCGTCCATCTGCTTTTTCTGAAATACACTAAGAGCAG
CCACAAAACGTGTAACCTCAAGGAAACCA TAAAGCTTGGAGTGCCCTTAATTTTAAACGTT
TCCAATAAACCAGTTTACTACCT

13704.2-13740.2

GGAGATGAAGATGAAGCAAGCTGAGTCACTACGGGGCARGCGGGCAGCTGAAGATGATGA
GGATGACGATGTCTGATACCAAGCAAGCAGAAAGACCGACGAGGATGACTAGACAGCAAAAA
AGCAAAAAGTTAAA

13706.1

GATGAAATTAATACTTAATTAATCAAAAGGCCTACCATACCACCTAAAACCTACTG
 CCTCACTGCCAAGTAXGCTAAXGAAGATCAAGCTACAGSACATYATCTAATAATGAATGTTA
 GCAATTACATAKCAAGAAAGCATGTTTCTTTCCAGAAAGCTATGGNACAAATGGTCATTWG
 GGCCCAAGAGGATATTTGCCCTGGAAAGCATCAAGATAGATNAANGTAAAG

15706.2

GACTAGCAACCCAAAGGCGCTTGGTATTGAGTCTGTGGGCGACTTGGGTTCCGGTCTCTGCA
GCAGCGGTGATCGCTTAGTGGAGTGGCTTAGCTAGTTGGCCAGGATGCCGAATATCAAAA
TCTTCAGCAGCCAGCTCCCAACAGGACTTATCTCAAAAAATTCCTGACCCCGCTGGGCGCTGG
AGCTAGGCAAGGTGCTGACTAAGAAATTCAGCAACCCAGGAGACCTGTGTGCAAAATTCGTG
AAAGTGTACCGTGGAGAGGATGTCTACATTCTTCAGAGATGGTGTGTGGGCAATCAATGAC
AATTAAATGGAGCTTTTGATCATGATTAATGCGCTGCAAGATTGCTTCAGCCAGCCCGGTTA
CTGCAGTCATCCCATGCTTCGCTTAGGCCCCGGCAGGATAAGAAAGATNAGAGCCCGGGC
GCCAATCTCAGCCAAGCTTGGTGCATAATGCTATCTGTAGCAOTGCAGATCATATTATCA
CCAATGGACCTACATGCTTCTCAAAATTCANGCGCTTTT

FIG. 15K

13707.3

ATGCCAAAAGGGGACACAGGGGGTTCAAAAATAAAAATTCTCTTCCCTCTCCCAAACT
GTACCCAGCTCCCCGACCACAACCCCTTCTCTCCCGGGGAAAGCAAGAAGGAGCAGG
TGTGGCATCTGCAGCTGGCAAGAGAGAGGCCCGGGAGGTGCCGAGCTCGGTCTGTCTC
TTTCCAAATATAAATACGTGTGTACAGAACTGGAAAACTCTCCAGCACCCACCACCAAGCA
CTCTCCCTTTTCTGCCCGTGTGTGGAGAGGGGCCGNGGGCAGGGGGGCCAGGCACCCGGCT
GGCTGCCGTCTACTGCATCCGCTCGGTGTGCACCCCGCA

13710.2

AGGTTGGAGAAGGTCAATGCAGGTGCAGATTGTCCAGGSKCAGCCACAGGGTCAAGCCCAA
CAGGCCAGAGTGGCACTGGACAGACCATGCAGGTGATOCAGCAGATCATCACTAACACA
GGAGAGATCCAGCAGATCCCGGTGCAGCTGAATGCCGGCCAGCTGCAGTATATCCGCTTA
GCCAGCCTGTATCAGGCACTCAAGTTGTGCAGGGACAGATCCAGACACTTCCACCAAT
GCTCAACAGATTACACAGACAGAGGTCCAGCCAAGGACAGCAGCATTCAAGCCAGTTTAC
AAGATGGACAGCAGCTCTACCAGATCCAGCCAAGTCAACCATGCTTGGGGGCCANGACCTCG
CCAGCCCATGTTTCATCCAGTCAAGCCAACCAGCCCTTCAAGGGGAGGCCCCCCCAGGTGAC
CGGGCACTGAAGGGGCTGAGCTGOC.AAGGCCAANGACACCCAACACAATTTTTGCCATAC
AGCCCCCAGOCAATGGGCCACAGCCTTTCTTCCAGAGGAC

13710-1

TGAGATTTATTGCATTTTATGCCAGCTTCAAGTCCATGCCAAAGGROACTAOCACAGTTTGA
ATOCATTTAAAAATAAAACCCAGGTGGGCAAGCAAAACACACAAGTCTACTTTCTCTGGG
TCCCTGGGAGAAAACAGTGTGGCAATGAATCCACCCACTCTCCACAGCGAATAAATCTGT
CTCTTAATGCAAAACAATGTTTCCATGGCCTCTGGATGCCAAATACACAGAGCTCTGGGGTC
AGAOC.AAGGGAATGGGAGAGGACCAAGTGA.AAAAGCAGCTACACACATTACCTAAT
TCCATCTGAGGCCAAGAAACAACGTGGCAAGTCTTGGGGGTACCACTCTT

13711.1

TCCAGACATGCTCCTGTCTAGGCCGGGACCAGCAACCAGACCTGCTATGGGAACCAGAA
ACAGTTAAAGGGAAGGTTTCTTCAATCTCTCTCTCTCTTTTCTTTGAACAGTTTTTA
AATATACTAATAGCTAAGTCAATTCAGCCAGGTCCCGGTGAACAGTAGAGAAACAAGGA
GCTTGCTAAGAAATTAATTTTCTGTCTTCAACCCATTCAAACAGAGCTCCCTGTTCCTG
ATCGAGTTCCATTCTCCAGGGCCAGGCTCAGTAACACCAAGCCATTCAAAGAAAGCCGG
GTGTORAAATCACTGCCACCCCAATGACACAGACCCCTCACTCTTCTTTAGCCGGCAGCCT
ACTTAATAAATATATTAATCTTGAATTAATGATAACCGAATTTCCCATGGGCAATCTTA
AGGCCACTTGGCAGCTCTTAATCCGGACAGTCAAGCACTGTTGTGGACAAACAGATAAAGG
AAAAA.AAAAGAA.AGA.AA.AACCCGCACTTCTGT

FIG. 15L

13711.2

TGAGACGGACCACTGGCCTGGTCCCCCTCATKTCCTGTCGTAGGACCTGACATGAAACCG
 AGATCTAGTGGCAGAGAGGAAGATGATGAGGAACCTTCTGAGACGTCGGCAGCTTCAAGAA
 GAGCAATTAATGAAGCTTAACTCAGGCCTGGGACACTTGATCTTGAAAGAAGAGATGGAG
 AAAGAGAGCCGGGAAAGGTCATCTCTGTTAGCCAGTCGCTACGATTCTCCCATCAACTCAG
 CTTACATATTCCATCATCTAAAACCTGCATCTCTCCCTGGCTATGGAAGAAATGGGCTTCA
 CCGGCTGTCTTCTACCGACTTCGCTCAGTATAACAGCTATGGGGATGTCAGCGGGGAGTG
 CGAGATTACCAGACACTTCCAGATGGCCACATGCCCTGCAATGAGAATGGACCGAGGAGTG
 TCTATGCCCAACATGTTGGAACCAAGATATTTCCATATGAAATGCTCATGGTGACCAACA
 GAGGGCGGAAACCAATCTCAGAGAGGTGGACAGAA

13713.1&2

TCACTTTATTTTCTTTGTATAAAAACCCATGTTGTAGCCACAGCTGGAGCCTGAGTCCGCT
 GCACGGAGACTCTGGTCTGGGTCTTGACGAAGTGGTCAGTGAACCTCCTGATAGGGAGACT
 TGGTGAATACAGTCTCTCTCCAGAGGTGGGGGCTCAGGTAOCTGTAGGTCTTAGAAATGGC
 ATCAAAGGTGGCCTTGGCGAAGTTGCCCAAGGCTGGCAGTGCAGCCCGGGCTGAGGTGT
 GCAGTCATCGATACCAOCCATCATGAG

13715.4

CTGGAATATAGACCCGCTGATCGACAAAACCTTGAACGAGGCTGACTGTGCCACCGTCCCG
 CAGCCATTCCTCTACTGATGACACAAAGATGTGGTCAATGACAGAAATCAGCTTTGTAAAT
 ATGTATAATAGCTCATGCAATGTCTCATCTCATAACTGTCTTCATACCTTCTGCACTCTGG
 GGAAGAACGAGTACATTGAAGCGAGATTGCCACCTAGTGGCTGGGAGCTTCCCAGGAACC
 CAGTCCCCAGGGAACCGTGGCACTTACCTTTCTCCCTTCTCTTCATTCTTGTGAGATGATAAA
 ACTGGGCACAGCTCTTAAATAAAATATAAATGAACA

13717.1&2

TGAATGGGACGAGCTGACCCAGCAAAATGGAGCTTGGGAGACCAGGCCCTGCAGGGCAT
 GGAACCTTCCACAAGTGGGCATCTGTGGTGGTGGCTCTGGGAAGGAGGAGAGTACAGA
 TGCCATGTGGAACATGAGGGGCTGGCTGAGGCCCTCACCCTGAGATGGGCCAGGAAGGAG
 CTTCTTCATCCACCAAGACTAACACAGTAATCATTCCTGTCTCCGTTGTCTTGGAGCTGT
 GGTATCTCTTGAAGCTGTGATGGCTTTTGTGATGAAGAGGAGGAGAAACACAGGTGGAAA
 AGGAGGGGACTATGCTCTGGCTCCAGCTTCCAGAGCTCTGATATGTCTCTCCAGATTGT
 AAAGTGTGAAGACAGCTGGCTGGTGTGGACTTGGTGACAGACAATGTCTTCACACATCTCC
 TGTGACATCCAGAGACCTCAGTCTCTTACTCAAGTGTCTGATGTTCCTGTGAGTCTCCG
 GCTCAAGTGAAGAACTGTGGAGCCCACTCCAGCCCTGCACACCAGGACCCTATCCCTG
 CACTGCCCTGTCTTCCCTTCCACAGCCAACTTGGCTGCCAGCCAAACATTGGTGGACAT
 CTGCAGCCTGTGAGCTCCAATGCTACCTGACCTTCAACTCCTCACTTCCACACTGAGAAAT
 ATAAATTTGAAATGTGGGTGGCTGGACAGATGGCTCAGCGCTGAGTGTCTTCCAAAGTCTCT
 GAGTTCAAATCCAGCAACCACATGGTGGCTCACAACCATCTGTAAATGGGATCTAATACCC
 TCTTCTGCACTGTCTGAAGACASCTACAGTGTACTTACATATAATAATAAATAAG

FIG. 15M

13723.2

GATGTGTTGGACCCCTCTGTGTC.AAAAAAACCCTCACAAGAATCCCTGCTCATTACAGAA
GAAGATGCCATTAATAATATGGGTTATTTTCAACTTTTATCTGAGGACAAGTATCCATTAA
TTATTGTGTCAGAAAGAGATTGAATACCTGCTTAAGAAGCTTACAGAAAGCTATGGGAGGAG
GTTGGCAGCAAGAACAAATTTGAACATTATAAAATCAACTTTGATGACAGTAAAAATGGCC
TTCTGTCATGGGAACCTTATTGAGCTTAATGGAATGACAGTTTAGCAAAGGCATGGACCG
GCAGACTGTGTCTATGGCAAATTAATGAAGTCTTAATGAAGTTATATTAGATGTOTTAAG
CAGGGTTACATGATGAAAAAGGGCCACAGACGGAAAAACTGGACTGAAAGATGGTTTGT
CTAAAACCCAAACATAATTTCTTACTATGTGAGTGAGGATCTGAAGGATAAGAAAGGAGAC
ATTCTCTTGGATGAAAAATGCTGTGTAGAAAGTCCCTGGCTGACAAAAGATGGAAGAAAT
GCCTTT

13725.1

GACTGGTTCTTTATTTCAAAAAGACACTTGTCAATATTCAGTRTCAAAACAGTTGCACTATT
GATTTCTGTTCTCCCAATCGGCCCAAAAGAGACCACATAAAAAGGAGGTACATTTTAAGC
CAATAAGCTGCAAGGTGTACACCTAACAGACCTCTAGAAACCTTACCAGAAAAATGGGGA
CTGGGTAGGGAAGGAACTTAAAGCATCAACAACTGCCAGCCCAAGGACTGCAGAGGCT
GTCACAGCCAGATGGGGTGGGAGGGTGGCAGAACCCAAAGCAAAGTTTCAAAATAATA
TAAATTTAAAAAGTTTGTACATAAGCTATTCAGGATTCTCCAGCACTGACTGATACAA
AGCACAATTGAGATGCCACTTGTAGAGACAGCAGCTTCAAAGCCAGAAAAGGGTGATGAG
ATCAAGTTTCAATGCTAAATCAATGGCAAAAACACAGTCTTCTTTCTTTCTTTTCAA
GGAGCAGGAAAACCAATTAAGTGGTCACTTAACATAAGGGGGAC

13725.2

TGGGTGGGACCATGCGTGGCATCACCACCATGGAGGGCGGTGAACGGCAAGATCCAGGTT
CTGCACGAGCAGGCAGATGATGACAGCGAGCGAGCTGAGCGGCTCCAGCGAGAAAGTTGA
GGGAGAAAGCCGGGGGGGGGAGACAGGCTGAGGCTGAGGTGGCTCTCTTGAACCGTAGGA
TCCAGCTGGTTGAAGAAGAGCTGACCTGCTCAGGAGCGGCTGGCCACTGCCCTGCAAA
AGCTGGAAGAGCTGAAAGGCTGCTGATGAGAGTGAAGAGAGGTATGAAGGTTATTGAA
AAGCGGGCTTAAAGATGAAGGAAAGATGGAACTCCAGGAATCCAACTCAAGGAAGC
TAAGCACATTGACAGAGAGGAGATGGGAAGTATGAAGAGGTGGCTCTGAAGTTGGTGT
CATGAGAGGAGACTTGGAAACGGACAGAAAGCAAGCAGCTTGACCTTGGCAAAAGTCCGT
TGCCCAAGAGATGGGATGAACAGATTAGACTGATGGAACCAAAAC

13725.2&2

AGGGCCNGCGGCTGCGTGGGCCACTGGGTGACCGACTTAGCCCTGGCCAGACTCTEAGCAC
CTGGAAAGCCGCCCCAGAGTGCAGCGGTGAGGCTGGGAGCGAGGACTTGGCTTGAAGTTGT
TAACTCTGCTGTGAGCCCTCTTGTGCGCTGCAATTAAGATGGCTCCCGCAAGAAAGGCTGG
CGAGAAGAAAAAGGGGCTTCTGCAATCAACGAAGTGGTAACCCGAGAAATACACCATCAA
CATTCACAAGCCCATCCATGAGTGGCTTCAAGAAAGCTGCACTTGGGGCACTCAAAAG
GATTCGGAATTTGGCATGAAGGATGAGGAACTCCAGATGTGCGCATTGACAGCAAGGCT
CAACAAGCTGTCTGGCCCAAGCAATTAAGGAATGTGGCATACCGAATCCGGTGTGGCGC
TGTCCAGAAAGCTAATGAGGATGAAGATTACCAAAATAGCTATAACTTTGGTTAECTA
TGTACCTGTTACCACTTTCAAAATCTACAGACAGTCAATGTGGATGAGAACTAATCGCTG
ATCGTCAGATCAAAATAAGTTATAAAT

FIG. 150

13727.1

TGGGGAGCCACACTTGGCCCTCTTCTCTCCAAAGGCCAGAACCTCCTTCTCTTTGGAGAA
 TGGGGAGGCCCTTTGGAGACACAGAGGGTTTACCTTGGATGACCTCTAGAGAAATTCGC
 CAAGAAGCCCCACCTTCTGGTCCCAACCTGCAGACCCACAGCACTCAGTTGGTCAGGCCCT
 GCTGTAGAAGGTCACTTGGCTCCATTGCTTGGCTTCCAACCAATGGGCAGGAGAGAAAGGCC
 TTTATTTCTCGCCCAACCAATTCCTCTCTGTACCAGCACCTCCGTTTTTCAGTCAGTGTGTGTC
 GCAACGGTACCGTTTACACAGTCACCTCAGACACACCAATTCACCTCCCTTGGCAAGCTGT
 TAGCCTTAGAGTGATTGCACTGAACACTGTTTACACACCCGTGAATCCATTCCCATCAGTCC
 ATTCCAGTTGGCACCCAGCCTGAACCAATTTGGTACCTGGTGTAACTGGAGTCCCTGTTTACA
 AGGTGGAGTCCGGGCTTGGTGACTTCTCTTCAATTTGAGGGCAC

13727.2

ACCTAGACAGAAAGGTGGGTGAGGGAGGACTGGTAGGAGGCTGAGGCCAATTCCTTGGTAGT
 TTGTCTGAAACCCCTACTGGAGAAAGTCAGCATGAGGCACCTACTGAGAGAAAGTGGCCAGA
 AACTGCTGACTGCATCTGTAAAGAGTTAACAGTAAAGAGGTAGAAGTGTGTTTCTGAATCA
 GAGTGGAAAGCGTCTCAAGGGTCCACAGTGGAGGTCCCTGAGCTACCTCCCTTCCGTGAGT
 GGGAAAGAGTGAAGCCCAAGAGAGTGAAGCAAGGATGGGCTTCTCGGCTCCA
 GGCAAGCGCTGTGCTCTGTGAGCAGGAGCCCAAGGAGTCAGAAAGAAAGAACTAATCA
 TTTGTTGCAAGAAACCTTGGCCCGATACTAGCGGAAAGTGGAGCGCGNGGTGGGGGCAC
 AGGAAAGTGGAAAGTGAATTTGATGAGAGCAGAGAAACCTATGCAAGTGGCCGAGTCCAC
 TTCTAAAGTG

13729.1&2

TTCAAGCAATTTGAACAAGTATATGTAGATTAGAGTGAGCAAAATCATATACAATTTTCAT
 TTCAAGTTGCTATTTTCCAAATTTGTTCTGTAATGTCTTAAATTAATTAATAAATTAACAAA
 GCCAAAAATTAATTTATGACAGCAAGCCATCCCTACATTAATCTTACTTTTCCACTCAC
 CGGCCCATCTCTCTCTCTTTTCTTAATCTATCCCAATTAATAAGTCTTCTACTGGGCCGGGGC
 TGTGCTCATGCTGTAAATCCAGCAATTTGGGAGGCCAAGGCCAGGCGGATCATGAGGTC
 AAGAGATTGAGACCATCTGGGCAACATGGTGAACCCCGCTCGACTAAGAAATACAAA
 ATTAGCTGGGCAATGCTGGGCAATGCTGTAGTCTCTACTCTCGGAGGCTGAGCCAGAA
 GAATGCTTGAACCCCGGAGGCAAGCAATGCTGAGGCCCGATCGGCCACTGCACTCT
 AGCCTGGGCCACAGACTGAGACTCTCTCT

13731.1&2

TGTCCCACTCTAAAGCCCTATCAGCAGGCACTCTTACCAACAGATCGGGTCCCTGTTG
 AGCCCAACCCCATGAGCCCGGAGCAGCAATGCTCCCAATCAGGCCCATGCCCCACAGCT
 ACAAGGCCAGCAGATCCCTAATCTCTCTCTCAATCAAGTGGCTCTCCCCAGCCTGTCCCTT
 CTCCACCGCCACAGTCCGAGCCCGGCACTCTAGTCTTCCCCAAGGATGCAGCCTCAGCC
 TTCTCCACACCACTTTCCCGACAGACAAGTCCCGACAATCTGGACTGGTAGTTGCCAG
 GCCAACCCCATGGAACAAGGGCAATTTGCCAGCC

FIG. 15P

13734.1&2

TGTA AAAA ACTGTGTTTTTAA TTTTGTAT AAAATAAAGGTGGTCCATCCCCACGGGGGGCTGTAG
 GGAAATCCAAGCAGACCAAGCTGGGGTGGGGGGATGTAGCCTACCTCGGGGGGACTGTCTGT
 CCTCAAAAACGGGGCTGAGAAAGGCGCGTLAGGGGGCCAGGTCCACAGAGAGGGCTGGGATA
 CTCCCCCAACCCGAGGGGGCAGACTGGGGCAGTGGGGAGCCCCCATCTGTCCCCCAGAGGTGG
 CCACAGGCTGAAGGAGGGGGCTGAGGCACCGCAGCCTGCAACCCCCAGGGGTGCAGTCCA
 CTAAGTTTTTACAGAAATAAAGGAACATGGGGATGGGGAAAAAAGCACCAGGTCAAGGA
 GGGCCCGAGGGCCCCCAGATCCAGGAGGGGCCAGGACTCAGGATGCCAGCACCACCCCTAGC
 AGCTCCACACAGCTCTGGCACAGGAGGCCGCCACGGATTGGCACAGGCGGCTCTCTGGCCA
 TCAGGCCACATTGGAGAACTTGTCCCGACAGAGGTCAAGCTCGGAGGAGCTCTCTGTGGCC
 ACACACTGTACGAACACAGATCTCTTGTTAATGACGTACACACGGCGGAGGCTGCGGGG
 ACAGGGCACGGGAGGTCTCAGCCCCACTT

13736.1

ATGGCTGCTGGAATTTAGGTGGTAATAGGGGCTGTGGGCCATAAATCTGAAGCCTTGAGAA
 CCTGGGGTCTGGAGAGCCATGAAGAGGGAAAGGAAAAAGGGCAAGTCTTGAACCTAACC
 AATGACCTGATGGATTCTCTGACCAAGACACAGAAAGTGAAGTCTGTGTCTGTGCACTTCCC
 ACAGACTGGAGTTTTTGGTGTCTGAATAGAGCCAGTTGCTAAAAAATTGGGGGTCTGTGA
 AGAAATCTGATTGTGTGTGTATTCATGTGTGATTTAAAAATAAACAGCAACAACAATA
 AAAACCTGTACTGGCTGTTTTTCCCTGTATCTTTACAACATATTTTTGACCCCTCTGAAAA
 TTATTATACCTCAGCTAAATGGAAAGAGCTCTGTGTGTGTGGAAATTTTGTAAATTTTAAAT
 TATTTATCTCTCTCTCTTTTATTTTGGCTGCAAGATCCCTTGAGAGACTAATAAGCCTTA
 ATATTAATGATTTGTATAATATATATAAAT

13744.2-13698.2

GGCATGGGAGCGCACTCGCGCGACGCAAGGGCGGGCGGGAGGCACACGGAGCACTGCAGG
 CGCGGGGTTGGGACAGCCTCTTGGCTGGTGGGATAGTGTGTTTTCGGGGATCGAGGAT
 ACTCAGCAGAAACCGA,AAAATCCGGAACCAATCAATGTCCGAGTTACCACCATGGATCCA
 GAGCTGGAGTTTGCAATCCAGCCAAATACAACTGGAAAGCAGCTTTTTGATCAGCTGGTA
 AAGACTATCGGGCTCCGGGAAGTGTGGTACTTTGGCCTCCACTATGTGGATAATAAAGGAT
 TTCTACTCTGGCTGAAGCTGCAAGAGCTGTCTCCCCAGGAGGTCAAGCAAGGAGAATC
 CCTCCAGTTCAAGTTCCGGGCGAAGCTTCAAGCTGAAGATGTGCTGAGGAGGTCAATCC
 AGGACATACCCAGAAACTTTCTCTCTCAAGTGAAGGAAGGAATCTTAGCCGATGAGAT
 CTACTGCCCCCTTGARACTCCCTGTCTTTGGGTCTTACGCTTGTGCAATGCCAAGTTTGG
 GGACTACCACCAAGAAG

13746.1&2-13720.1&2

GAAGGAGTCCGGATACTCAGGAATGATCCAGCCCAATTTCAAAACCGGCATCTTGGGCAG
 GTCTCTGGGACAAATCTTAGGCTCACTACCTGGAAACTCOTTAGGGTACAACCTGAATGCTG
 AAAGGAAAGAACACCTGCAGAAACCGGACAGAAATCACCCCGGGATCAAGCTGAATGATC
 TCGGTCGACCAGAAAGTCATCGCTAAGATGACGAGGACCTTGTCAATTCCTCTGGGCTTTTC
 GAAGTGAGTCCAGCAGCACTCTGAGGTATTGGGGCGGTTATCCACCTGGAGCCAGCA
 CCAGCTCCCGGGGGGGCCAGCTCCAGCCTTATCTACATTCCTCAGGGTCTGATCAAAAGTT
 CAGCTGGTACACCAAGGACCGGTACCGCAGCCTCAGGTTGTCCCTCGGGCTGGCGGACC
 GCGGGACCAAGGAAGCCCGCCACAGCTTGGAGACCTGGGGATGCCCAACAGCCACAGAG
 GGGTGGTCCGACCGCGGCTCCCGGCAAGCCCGGGGCTTGGGGTCCAGCAACGGTGGG
 GCGAGGGCCTCGTTCTTCTTCTGGGCAATCTCTGCTCCAGAGGAGGAAGCCCGCAGGCGG
 CCACCAAGAGCTCAGGATAGGACCTTCCGTTTGTAGATGCGGAACCTCATGCTCTCCAG
 GCGCGGAGCGCAAGCTACAGCTGAGGCTGGCGCGCGGCTAGGAGCGCGCGCTCGGCT
 TCGTCTCGCTCTCTCTTCAAGCAGCAGGCTCGCGGAAAAABCTCAGCCCGGCTCCCA
 CCGCACCTAGCTTGGTTACCTCGGCTCGCTT

FIG. 15Q

14347.1

CAGATTTTATTTGCAGTGGTCACTGGGGCCGTTTCTTGCTGCTTATTTGTCTGCTAGCCTG
 CTCTTCCAGCTGCATGGCCAGGCCCAAGGCTTGATGACATCTCCAGGGCTGAGAAATGC
 TTGGCTTGCTGGCCAGAGCAGATTCCGCTTTGTTCAAAAAGGTCTCCAGGTGATAGTCTG
 GCTGCTGGTTCATCTCAGAGAGCTCAAGCCAGTCTGGTCTCTGCTGTATGATCTCTTGGAG
 CTCTTCCATAGCCTTCTCTCCAGCTCCCTGATCTGAGTCATGCTTCTGTTAAAGCTGGACA
 TCTGGGAAGACAGTTCTCTCTCTCTTGGGATAAATTGCCCTGGAATCAGCGCCCTTAGA
 GCAGGCTTCCATCTCTCTGTTTCCATTTGAATCAACTGCTCTCCACTGGGCCCCACTGTGGG
 GGCTCAGCTCCTTGACCCTGCTGCATATCTTAAAGGTGTTAAAGGATATTCACAGCAGCT
 TATGCTGCT

14347.2

CTCTCTTGGTACATGAACCCAAAGTTGAAAGTGGACTTAACAAAGTATCTGGAGAACCAA
 GCATTCGCTTTGACTTTGCATTTGATGAAACAGCTTCGAATGAAGTTGTCTACAGGTTTCA
 AGCAAGGCCACTGGTACAGACAATCTTTGAAGGTGGAAAAGCAACTTGTCTTTCATATGG
 CCAGACAGGAAGTGGCAAGACACATAGTATGGGGGGAGACCTCTCTGGGAAAGCCCCAGAA
 TGCATCCAAAGGGATCTATGCCATGGCCTTCCGGGAGCTCTCTCTGAAAGATCAACCT
 GTACCCGAAGTTGGGCTGGAAAGTCTATGTGACATCTCTGGAGATCTACAATGGGAAGCT
 GTTTCACCTGCTCAACAAGAAAGCCAAAGCTTGGCCCTGCTGGAAGACCGCAACCAACAGG
 TCCAAGTGGTGGGGGCTTGCAGGAACATCTGONTAACTCTGCTTGATGATGCCANTCAAG
 ATGATCGACATGGCCAGCCCTGACAG

14348.2&14350.1&2

TCCCGAATTCAGCCGACAAATTGGAAGTGAATGGAAGATGGCTATCATGAACATCAGG
 CAAATCTTTTCCGCAAGATCTGATGAGACGACAGGAAGAATTAAGACCGCATGGGAAGAAG
 TTCACAATCAAGAAATCCAGAAACCTTAAGCAATGCAATTGAGGCAAGAGGAGGAACGA
 COTAGAAAGAGAGGAAGACATCAATCAATGCAATGCAATGCAATGCAATGCAATGCAATGCA
 CCAAGAGAGAGGAAGTTACAGCCCAATGGCTTACATGGATCCACCGGAAAGAGACATGC
 GAATGGGTCCCGGAGGAGCAATGAACATGGGAGATCCCTATGCTTCAGGAGGCCAGAAA
 TTTCCACCTCTAGGAGGCTGCTGGTGGCATAGCTTATGAAGCTAATCCTGGGCTTCCACCAG
 CAACCATGACTGGTTCATGATGGGAAGTGCATGGCTACTGAGCGCTTGGCCAGGGAG
 GTCCGGGGGCTGTGGGTGGACAGGGTCTAGAGGAATGGGGCTGGAACTCCAGCAGGAT
 ATGCTAGAGGGAGAGAAAGACTAGCAAGGC

14349.1&2

TTGCTGAAGACCTTCACTGCTAAGACCATCACTCTCGAAGTGGAGCCCGAGTGCACAGCAT
 CAGAAATGCAAGGCAAGATCCAAAGACAAGCAAGGCCATCCCTGCTGACCAGCAKAGGTTG
 ATCTTTGCTGGGAAACAGCTGCAAGATGGAGCCAGCCTGTCTGACTACAACATCCAGAAA
 GAGTCCACCCCTGCACCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG
 TGAATGGTAAAGACCATCAACCTGCAAGGTGCAAGCCCAATGACACCATCOAGATGTCAAGG
 CAAGATCCAAGATAAAGCAAGCCATCCCTCTGATGACAGAGGTTGATCTTTGCTGGGA
 AACAGCTGGAAGATGGACCCAGCCTGTCTGACTACAACATCCAGAAACAGTCCACTCTGC
 ACTTGGTCTCTGGCTTGAAGCGGGGCTGTCTAAGTTTCCCTTTTAAAGTTTCAACAAATTT
 ATTGCACTTTCTTTCAATAAAGTGTTCATTC

FIG. 15R

14352.1 &

CGCGGGGTGCGTGCGCCACTGGGTGACCGACTTAGCCTGGCCAGACTCTCAGGCACCTGGA
AGCGCCCCGAGAGTGACAGCGTGAGGCTGGGAGGGAGGACTTGCGCTTGAGCTTGTTAAAC
TCTGCTTGAGCCTCCTTGTCGCTGCAATTAGATGGCTCCCGCAAGAAGGGTGGCGAGA
AGAAAAAGGGCGGTTCTGCCATCAAGCAAGTGTAACCCGAGAATACACCATCAACATT
ACAAGCGCATCCATGGAGTGCGCTTCAAGAAGCGTGACCTCGGGCACTCAAGAGATT
GGAAATTTGCCATGAAGGAGATGGGAAGCTCCAGATGTGGCGATTGACACCAAGGCTCAACA
AAGCTGTCTGGGCCAAAGGAATAAGGAATGTGCCATACCGAATCCGTGTGCGGCTGTCCA
GAAACGTAATGAGGATGAAGATTCAACAAATAAGCTATAACTTTGGTTACCTATGTACC
TGTTACCACTTTCAAAAAATCTACAGACAGTCAATGTGGATGAGAACTAATCGCTGATCGT

14331

AAATCTTTATTTAAATCAACAAGCTCATCTCTCAAGCCCCAGACCATGGTAGGCAGCCC
TCCCTCTCCATCCCTCACCCCACCCCTTAGCCACAGTGAAAGGAATGGAAATGAGAAGC
CAGGAGGGCCCTGCCAGGGAAGGCTGCCCCAGATGTGTGGTAGCCACAGTCAGTGCAGC
TGTGGCTGGGGCAGCAGCTGCCACAGGCTCTTCCCTATAAATTAAGTTCTTCCAGCCACAG
CTGTGGGAGAAGCATACTTTGTAGAAGCAAGGCCAGTCCAGCATCAGAAGGCCAGAGGCCAG
CATCAGTGACTGCCAGCCATGGAATGAAAGGAGGACACAGAGCTCAGAGACAGAACAGG
CCAGGGGGAAGAAAGAGAGACAGAAATAGGCCAGGGCATGCCGGTCAAGGA

143552

TGATGAATCTGCGGTGCGGCTGGCAGTAGCCCGAGATGATGGGCTCTTCTCTGGGGATCCCA
 CTGGTTCCCTAAGAAATCCAAAGGAGATCTCTGGCACTTCTCTGGATAACCAGCTGCAAGA
 GGGCAAGAACCTGATCCGCTTACAGATGGCCACCAACCCCGGGGCGCTCTCANGCAGGCAT
 GACTGGCTACGGGATGCCACGCCAGATCTCTGATCCCAACCCAGCCCTTCCCTCTGCCCT
 CCCACCAATGGTTAATATATATATATATATTTAOCAGTGAGATTCCAGAGAGAGCC
 CAGAGCTCTCAAGCTCTCTTCTCTCAGGCTGGGGGCTCAACCCGTGCTCTGTCACTCTGA
 AGTGCCTCTCTGGCATCTCTCTCCGCACTCTTACTAATACATTCCCTTCCCAATGCC

17182-142

AGCGGAGCTCCCTGCCCTGGTGGCTACACACACACAGCCAGGCTCAGCCATCGAGCAG
AACTCCAGCGACTGGGTAACCACTGCACATTCAGGTGAAGGTGCCGGACACCTACCTGGAT
ACACAGGTGGTGGGACAGACAGGTGTCTATCCGCAGTGTACCGGGGGCATGTGCTCTGTG
TACCTGAAGCAGAGTGAGAAAGTTGTGAGCATTTCCAGTGAAGCACTGGAGCCTATCACC
CCGACCAAGAACAAAGAGGTGAAGTGCATCTGGGGAGGATCGGGAAGCCACGGGGCT
CCTACTGACATTTGATGGGAGCAATGCCATTTCTGGTATGGAACCTTGAAGAGAGCTCAAG
ATCTCTACCTCCGCTTCTGGGGAAGCTGTGGAAAGCTGAAGCAGCAGGAGGCGCGGTGG
ACTTCGTGGGATGAAGAGTGAATCTCTCTCTCTCTCTGGGCTTGGCTGTGACACAGAATC
CTCCTGCAGGGCTAGGGGGCAATTTCTCTGCAATTTCTTTTGTTTTCTCTTTAGGTTTCCATCT
TTTCCCTCCCTGGTGTCTAATGGAATCTCAAGTAGAGTCTGGGGGAGGGTCCCCACCTTCT
GTACCTCTCGCCACAGCTTCTTTTGTGTACGGTCTTTCAATATAAAGAAGCTGTTTGT
CTA

FIG. 15S

17183.2

GGTTCACAGCACTGCTGCTTGTGTGTTGCCGGCCAGGAATTCCAGGCTCACAAGGCTATCT
 TACCAGCTCGTTCTCCGGTTTTAGTGCCATGTTTGAACATGAAATGGAGGAGAGCAAAAA
 GAATCGAGTTTGAATCAATGATGTGGAGCCTGAAGTTTTTAAGGAAATGATGTGCTTCATT
 TACACGGGGAAAGGCTCCAAACCTCGACAAAAATGGCTGATGATTTGCTGGCAGCTGCTGAC
 AAGTATGCCCTCGAGCGCTTAAAGGTGATGTGTGAGGATGCCCTCTGCAGTAACCTGTCCG
 TGGAGAACGCTGCAGAAATTCTCATCTCGGCCGACCTCCACAGTGCCAGATCAGTTGAAAA
 CTCAGGCAGTGGATTTTCATCAACTATCATGCTCCGGATGTCTTGGAGACCTCTTGGG

17186.1&2

TGGTAGCCATTITTCYGTCTTCTTGGAGAATGAGGCCACACTGACTGCTCATTGTGCTTGGT
 TCCATGCCAATTGGTGAAATAGAACCCTCATCCGGTAGTGAGCCCGGAGGGACATCTTGTG
 ATCAACGGTGATGCTGCCATTTGGAGCATACAGAGCTTGGTGTCTCTGCCATACAGGGCA
 AAGAGCTTGTGACAAAGAGGAGAGATACGGCATGCCCTGTGACGCCCTGATGCCAGATTCC
 TCTGCTGTGTACTCTCCACTGCCCAGCCGGAGGGCTCCCTGTCCGACAGATAGAAGATCA
 CTTCCACCCCTGGCTTG

17187.1&2

TGGCACACTGCTCTTAAGAAACTATGANGATCTGAGATTTTTTGTGTATGTTTTGACTCT
 TTTGAGTGGTAATCATATGTCTCTTATAGATGTACATACCTGCTTCCACAAATGGAGGGG
 AATTCATTTTCATCACTGGAGCTGCTCTTAGTGTATAAAAAACCATGCTGCTATATGGCTTC
 AAGTTGTAAAAATGAAAGTGACTTTAAAGAAAAATAGGGGATGGTCCAGGATCTCCACTG
 ATAAGACTGTTTTAACTAACTTAAGGACCTTTGGGTCTACAAGTATAATGAAAAAAATG
 AGACTTACTGGCTGAGGAATTCATTGTTTAAAGATGGTGGTGTGTGTGTGTGTGTGTGTG
 TGTGTTGTGTTCTTTTTGTTTTTAAAGGGAGGGAAATTTATTTTACCCTTGCTTAAAAAT
 ACTGKGTAAATATATGTGTGATAATGATTTGCTTGTGVMACATAAAATACGGCTGTATA
 AGTWTARATGCMTCCTGGGKGTTCATTTTCCMAGATATTGATGATAMCCCTTAAAAAT
 GTAACCYGCCTTTTTCCCTTTGCTYTGMATTAAGTCTATTGMAAAG

17191.1&89.1

GGGGGTAGGCTCTTTATTAGACGGTATTGCTGTACTACAGGGTCAGAGTGCCAGTGTAAAGC
 AGTGTACAGAGGCCCCGCTTCAGCCCAAGAAATGTGGATTTCTCTCCCTATTGATCAGAGTG
 GGTGGGTTTCTTCAGAAAAGCCCCAGAGCCAGGGACCAAGTGAAGCTCCAAGGTTAGAAGTG
 GAACTGGAAAGGCTTCAGTCACATGCTGCTTCCAGCCTTCCAGGCTGGCCAGCAACGAGGA
 GATGCCCATGACGTGCCAGGCTGTGCTCATGTGACACCACTGAAGTCTGCTAGGACAGCAG
 CCGCACCCCTGCTCTGCCAGGAGGCCAATCATGCTAGGACAGCATTCCAGGGTCAAGGGT
 CTGAGTCCGGAAATAGCAGCAGGGGACGTCCTTCCGGAGAGGCACTTCTGCGCTGAAGAC
 AGCTCCATTGAGCCCTCTCAGTACAGGCTGAGTGTGCTTGGACCAAGCCACAGCCTGGA
 AGGGCCGCTGCCAGGGCCAGCGCCAGGAGCCA

FIG. 15T

17192.1&2

TAATTTCTTAGTGGTTTCGAAATGCTTAAGCATGCAAAAGCTTTGAACAGAAGGGTTACAA
 AGGAACCAAGGGTTGTCTTATGCCATCCAGTTAAGCCAGAGCTGGGAATGCCTCTGGGTCAI
 CCACATCAAGGAGGAGAAGCACTTGACTTGTGGTCTCTGCTGCCACGGTTTGGGCGCCCAAC
 ACGGCCACCTCCACCTCTCTCTCCCTGCGGCCACGTCCTGGGCGGCCAAGGTCTCCAAA
 TTGATCTCCAGCTGAGACGTTATATCAATTTGCTGGCTTCCOGAAATGATGGTCCATAACCG
 AATCTTCAGCATGAGCCTCTTCACTCTTGAATTTATGAGAACAATCCCTTCTTCCACTGC
 CCATCAGCACTTTCATTTGTTTTGGGATATTAAATTCTACTTTTGGCCGGTCTTAATTTGA
 ATAGCCTTCCACTCATCCAAAGTCAATCTCTTTGGACCTCTCTTTTACCTCTTCAACTTCA
 TTCTCTTAATTTCACTGTCTGCCACTGGATGATGTTCTTACCTTCAAGGTGTTTCTCTAGTC
 ACATTTGATTTGATCCAAAGTCAATTAATTCGTCTTTGACAGTTCCTCCAGTTGTGAGATCCGCT
 ACCTCCAGCTTTGTCTCTCTCTCTGCTTCCAGGCCAGATCTATCACTTCCACTATGCCATCAAAAT
 CAGCTTTGCCACGAGAATCAAAATCCATCTCTCTGGCCCATTCACGTCACGGCCCTCTCG
 ACCTCTTCCACAGACCACCAAGCTCGAATAGGTCTGGTCAAFAATCGGTCTATCAACTGAA
 AATTCGCTCTCTTCACTCTTTCTTCAAGTGGCTTTTGGAAATCTTCTTCAAGAGGTGGTCTG
 CTTTCTGGTCTTCTATCAATTAATTTCCCTTCACTCTGAAGTTGTTGATCAGGTCTCTCTCC
 AACTCGTGC

17193

AAGCGGATGGACCTGAETCAGCCGAATGCTAGCCCTTCTCTTGGGCTGCTGTGGTCTC
 GACATCACTGACAGACGGAAAGACAGACCATCAAGGCTACGGGAGGCTGGGCGGCTT
 GCGAAGATGAAGTTTGGCTGCTCTCTTCCGGCAGCTTATGCTGGCTTTGTCTTAAATG
 GAATCAAGACTGTGAGACCCGCTGCGCTCTCTGCTGAGCAGCCAGCGCAACTGTACCA
 TCGGCTGCCACATTCCTCAGAGGCACTGGCAAGGCGATGCTGTCTGGGAGCTGCTGTGG
 AGAGACTCGGCACTGACTCTCTCTCAATTCAGGCTTCTCTAGGAAGGGGCAAAAGTTTG
 GTCGAGGAGTGATAGCGGCACTCTCTTCAATTTGGGGAATCTTTCGAATGCCCCGAAGACT
 TAACTCCCGATGAGGTTCTGGAATCAAAAAATCAAGCTGCACTGACCAACTGAAAGCAGA
 AGTACCTGACTGTGATTTCAAGCCCAAGGTGCTTACTGGAGCCCATACCTAGGAAAGGAG
 CGAAGGATGTATTCACCTAGACATCCAGAGCACTGATCCCTTTGGGCGCATGAAGTGT
 GACAAGTGTGCGCTCTGAAAGGAATGTTCCGAGAAACCAGCTAAATCATGGCACCTTC
 AATTTGCCATCTGTACCGCACTCTGTATAAATAGGTTAAAGATGAATTTCCACTGCTTTG
 GAGAGTCCCACTTAAGCACTGTGCAATCAACAGGTCTCTTGTCTCAGATGAAGGAA
 GTAGGGGGTGGGCTTCTCTGTGTGATGCTCTCTTACGGCAGACAGCCAAATGCTCAAGTA
 CTITGACCTTAGGOTAGAAAGCCAAAGCTGCCAGTAAATGTCTCAGCATTCCTGCTAAATTT
 GGTCTCTCAATTTCTGGAATGTACAAAATAATGTGTTGTAGATGA

FIG. 15U

16443.1.edi

TCGAGCGGCGGCGCGGCGGAGGTGTGCGGAGTCCAGCACGGGAGGCGGTGGTCTTGTAGTTGT
 TCTCCGGCTGCCCAATTGCTCTCCCACTCCACGGCGATGTGCTGGGATAGAAGCCTTTGAC
 CAGGCAGGTCAAGGCTGACCTGGTCTTGGTCACTCTCCCGGATGGGGGCGAGGTGTAC
 ACTGTGGTTCTCGGGGCTCCCTTTGGCTTGGAGATGGTTTCTCGATGGGGGCTGGGA
 GGGCTTTGTGGAGACCTTGCCTTGTACTCTTGGCATTCACCAAGTCTGTGTGCANGAC
 GGTGAGGACGCTNACCACACGGTACGNGCTGGTGTACTCTCTCCCGGCTTTGTCTTG
 GCATTATGCACCTCCACGGCGTCCACGTACCAATTGAACCTTGACCTCAGGGTCTTCTGTGG
 TCACGTCCACCACCGCATGTAACTTCAAANCTCGGNGCGGANCACGC

16443.2.edi

AGCGTGGTGGCGGCGGAGGTCTGAGGTACATGCGTGGTGGTGGACGTGAGCCACGAAGA
 CCTGAGGTCAAGTTCAACTGGTACGTGGACGGGTGGAGGTGCATAATGCCAAGACAAA
 GCGCGGGAGGAGCAGTACAAACAGCACGTACCGTGTGGTCAAGCTCTCACEGTCTTGA
 CCAGGACTGGCTGAATGGCAAGGAGTACAAGTGCAAGGTCTTCAAACAAAGCCCTCCAGC
 CCCCATCGAGAAAACCACTCTCAAAGCCAAAGGGCAGCCCCGAGAACACAGGTGTACAC
 CTTGCCCCCATCCCCGGAGGAGATGACCAAGAACCAGGTCAAGCTGACCTGCTGTCAA
 AGGCTTCTATCCCAAGCAGATCTGCGCGTGGAGTGGGAGAGCAATGGGCAAGCTGGAGACA
 ACTACAAGACCACGCTCTCTGTGGTGGACTCCGACACCTGCGGGGCGGCGCTCGA

16444.1.edi

AGCGTGGTTCGCGGCGGAGGTCTGAGGTACATGCGTGGTGGTGGACGTGAGCCACGAAGA
 CAACATGGAGACTGGTGGAGACTCTCTGTACCCCACTCAGCCCAAGTGTGGCGGAGAGAA
 CTGGTACATCAGCAAGAACCCCAAGGACAAAGAGGCAATGTCTGCTTGGCGAGAGCAAGAC
 CGATGCAATCCAGTTCCAGTATGGCGGCGGAGGCTCCGACCTGCCCCATGTGGACCTGCCC
 GGGCGGNGCGCTCGA

16445.1.edi

AGCGTGGTTCGCGGCGGAGGTCTGAGGTACATGCGTGGTGGTGGACGTGAGCCACGAAGA
 CACTCTGACTGGAAGACTGGAGACTGGAATTGACCCCAACCAAGGCTGCAACCTGGAT
 GCCATCAAAGTCTTCTGCAACATGGAGACTGGTGGAGACTGGGTGTACCCCACTCAGCCCA
 GTGTGGGCGGAGAGAACTGGTACATCAGCAAGAACCCCAAGGACAAAGAGGCATGTCTGGT
 TCGGCGAGAGCATGACCAATGGATTCCAGTTCCAGTATGGCGGCGGAGGCTCCGACCTG
 CCGATGTGGACCTGCCCCGGGCGGCGCTCGA

FIG. 15V

16445.2.edit

TCGAGCGGTCCGCCGGGCAGGTCCACATCGGCAGGGTCGGAGCCCTGGCCGCCATACTCG
 AACTGGAATCGATCGGNCATGCTCTCGCCGAACCAGACATGCCTCTTGNCTTGGGGTTCT
 TGCTGATGTACCAGNTCTTCTGGGCCACACTGGGCTGAGTGGGGTACACGCAGGTCTCACC
 AMTCTCCATGTTGCANAAGACTTTGATGGCATCCAGGTTGCAGCCTTGOTTGGGGTCAATC
 CAGTACTCTCCACTCTTCCAGACAGAGTGGCACATCTTGAGGTCACGGCAGGTCCGGGGCG
 GGTTCTTGACCTCGGTCCGACCCACGCT

16446.1.edit

TCGAGCGGCCCGCCCGGGCAGGTCTCTCTCAGAGCGGTAGCTGTTCTTATTGCCCGGGCAGC
 CTCCATAGATNAAGTTATTGCANGAGTTCTCTCCAGGTCAAAGTACCAGCGTGGGAAGG
 ATGCACGGCAAGCCCCAGTGACTGGGTTGGCGGTGCAGTATTCTTCATAGTTGAACATATC
 GCTGGAGTGGACTTCAGAACTCTGCTTCTGGGAGCACTTGGGACAGAGGAATCCCTGC
 ATTCTGCTGGTGGACCTCGGCCGGGACCCAGCT

16446.2.edit

AGCGTGGTCCCGCCCGGAGGTCCACCACCAGGAATCCAGCGGATTCTCTGTCCCAAAGTGC
 TCCCAGAAAGCCAGGATTCTGAAGAGCCTCCAGCGATACTTCAACTATGAAGAATACTG
 CACCGCCAAAGGCAGTCACTGGGGCTTGGCGTGCATCTCTCCACGCTGCTACTTTGACGTG
 GAGAGGAACCTCTGCCAATAACTTCATCTATCGAGGCTCCCGGGCAATAAGAACAGCTAC
 CGCTCTGAGGAAGACCTCCCGGGGGGGCCCTCGA

16447.1.edit

TCGAGCGGCCCGCCCGGGCAGGTCCACATCGGCAGGGTCGGAGCCCTGGCCGCCATACTCG
 AACTGGAATCGATCGGTCATGCTCTCGCCGAACCAGACATGCCTCTTGTCTTGGGGTTCT
 TGCTGATGTACCAGTTCTTCTGGGCCACACTGGGCTGAGTGGGGTACACGCAGGTCTCACC
 AGTCTCCATCTTGCAGAAAGACTTTGATGGCATCCAGGTTGCAGCCTTGOTTGGGGTCAATC
 CAGTACTCTCCACTCTTCCAGCCAGATGGCACATCTTGAGGTCACGGCAGGTCCGGGGCG
 GGTCTTGACCTCGGTCCGACCCACGCT

FIG. 15W

16447.2.edit

AGCGTGGTGGGGGGGAGGTCAAGAAACCCCGCCGACCTGCCGTGACCTCAAGATGTG
 CCACTCTGGCTGGAAGAGTGGAGAGTACTGGATTGACCCCAACCAAGGCTGCAACCTGGA
 TGCCATCAAAGTCTTCTGCAACAAGGAGACTGGTGAGACCTGCCGTGACCCCACTCAGCCC
 AGTGTGGCCGAGAAGAACTGGTACATCAGCAAGAACCCCAAGGACAAGAGGCCATGTCTGG
 CTCGGCCGAGAGCATGACCGATGGATTCCAGTTCCAGTATGGCGGGCCAGGGCTCCGACCCCT
 CCGGATGTGGACCTGCCCGGGCGGCCGCTCGA

16449.f.edit

AGCGTGGTGGGGGGGAGGTGCTGTGACAGTGGCACTGGTAGAAGNTCCAGGAACCCCTGA
 ACTGTAAGGGTTCTTCATCAGTGCCAAACAGGATGACATGAAATGATGTACTCAGAAAGTGTG
 CTGNAATGGGGCCCATGANAATGOTTGACTGAGAGAGAGCTTCTTGTCTTACATTCCGGCG
 GTATGGTCTTGGCCTATGCCCTTATGGGGGTGGCCGTTGNGGGCGGTGNGGTCGGCCTAAAA
 CCATGTTCTCAAGAGATCAATTGTTGCCCAACACTGGGTTGCTGACCANAAGTCCAGGAA
 GCTGAATACCATTTCCAGTGTGATACCCAGGGTGGGTGACGAAAGGGGCTCTTTGAAGTGT
 GGAAGGAACATCCAAGATCTCTGNTCCATGAAGATTGGGGTGTGGAAGGGTTACCAAGTTG
 GCGAAGCTCGCTGTCTTTTTCTTCCAATCANGGGCTCGCTCTTCTGAATATTCTTCAGGGC
 AATGACATAAAATGTATATTGGGTTCGGTTCCCGGTTCCAGGCCAG

16450.1.edit

TGGAGCGGGGGGGGGGGGAGGTGACCAACACCCAAATCCCTTGGCTGATATCATGGCAGCCCG
 CACGTGGCAGGATTACCGCTACATATCAAGTATGACAAAGCCTGGGTCTCTTCCAGAGA
 AGTGGTCCCTGGGGGGGGGGGGTGGTGCAGAGGCTACTATTACTGGCCTGGAACCGGGGA
 ACCGAATATACAAATTTATGTCAATGGCCTGAAAGATAATCAGAACACCGAGCCCTCATTC
 GAAGGAAAAAGACAGACCGAGCTTGGCCAACTGGTAAGCCTTCCACACCCCAATCTTCATG
 GACCAAGAGATCTTGGATCTTCTTCCACAGTTCAAAAGACCCCTTCTCTCAGCCACCCCTGG
 GTATGACACTGGAAATGGTATTCAGCTTCTCTGGCACTTCTGCTCAGCAACCCAGTCTTGGG
 CAACAAATGATCTTTGANGAACATGCTTTAGCGGGACCAACCGGGCCACAAACGGGCCACC
 CCCATAAGGCCATAAGGCCAAGACATACCTGNGGAATGTAGGACAAGAAAGCTCTNCTCAN
 ACAANGCATCTCATGGGGGGCAATTCANGACACTTCTGAGTACATCANTTCAAGGCATCCTG
 GTGCCACTGATAAAAAGCCTTACACTTA

16450.2.edit

AGCGTGGTGGGGGGGAGGTGCTGTGACAGTGGCACTGGTAGAAGTTCCAGGAACCCCTGA
 ACTGTAAGGGTTCTTCATCAGTGCCAAACAGGATGACATGAAATGATGTACTCAGAAAGTGTG
 CTGGAATGGGGGGGGCATGAGATGCTTCTGAGAGAGAGCTTCTTGTCTTACATTGGGGGGG
 TATGGTCTTGGCCTATGCCCTTATGGGGGTGGCCGTTGTGGGCGGTGTGGTCCGCCCTAAAA
 CATGTTCTCAAGAGATCAATTGTTGCCCAACACTGGGTTGCTGACCAGAAAGTCCAGGAAAG
 CTGAATACCATTTCCAGTGTGATACCCAGGGTGGGTGACGAAAGCCGCTCTTTGAAGTGTG
 GAAGGAACATCCAAGATCTCTGGTCCATGAAGATTGGGGTGTGGAAGGGTTACCAAGTTGG
 GGAAGCTCGCTGTCTTTTTCTTCCAATCANGGGCTCGCTCTTCTGATTATTCTTCAGGGC
 AATGACATAAAATGTATATTGCTGNTCCCGGCTNCAAGCCAAATAATAAACCCTCTGTGACA
 CCANGGGGGGGGGGGAAGGANDACT

FIG. 15X

16451.1.edit

AGCGTGGTCCGGGCGGAGGTCTCACCAGAGGTACCACCTACAACATCATAGTGGAGGCA
 CTGAAAGACCAGCAGAGGCATAAGGTTCCGGGAAGAGGTTGTTACCGTGGGCAACTCTGTC
 AACGAAGGCTTGAACCAACETACGGATGACTCGTCTGCTTGACCCCTACACAGTTTCCATT
 ATGCCGTTGGAGATGAGTGGGAACGAATGTCTGAATCAGGCTTTAACTGTTGTGCCAGTG
 CTTANGCTTTGGAAAGTGGTCATTTAGATGTGATTCATCTAGATGGTGCCATGACAAATGGT
 GTGAACTACAAAGATTGGAGAGAAGTGGGACCGTCAGGGAGAAAATGGACCTGCCCGGGC
 GCGCGCTCGA

16451.2.edit

TGGAGCGGCGCGCGGGCAGGTCCATTTTCTCCCTGACGGTCCCACCTCTCTCCAATCTTGT
 AGTTCACACCATTTGTCATGGCAGCATCTAGATGAATCACATCTGAAATGACCACTTCCAAA
 GCCTAAGCACTGGCACAACAGTTTAAAGCCTGATTGAGACATTCGTTCCCACTCATCTCCA
 ACGGCATAATGGGAAACTGTGTAGGGGTCAAAGCAGGATCATCCGTAGGTTGGTTCAAG
 CTTTCGNTGACAGAGTTGCCCAAGGTAAACAACCTCTTCCCGAACCTTATGCCCTCTGCTGGT
 CTTTCAGTGGCTCCACTATGATGTTGTAGGTGGTACCTCTGGTGAGGACCTCGGCGCGGAC
 CACGCT

16452.1.edit

AGCGTGGCGCGCGCGGCAAGTCCATTGCTCTGGAACGGCATCAACTTGGAAAGCCAGTGAATCG
 TCTCAGCCTTGGTTCTCCAGCTAATGGTGAATGGNGGTCTCACTAGCAATCTGTCAGACGAGC
 CTTCTTCTGCTGGCTGACATTTCTCCAGACTGGTQACAACAACCTGAGCTGGTCTGCTTGT
 AAAGTGTCTTAAGAACAAGACACTCACTTCATATTTGGCGNCCACCATAAGTCTGTATA
 CAACCACGGAAATGACCTGTACAGCAAC

16452.2.edit

TGGAGCGGCGCGCGCGGCAAGTCTCAGACCGGCTTCTAGTACACAGTCACTGTGGTTGC
 CTTCCACGATGATATGGAGAGCCAGCCCTGATTGGAAACCCAGTCCACAGCTATTCTGCA
 CCAACTGACCTGAAGTCACTCAGGTCAACCCACAAGCCTGAACCGCCAGTGGACACCA
 CCCAATGTTGAGTCACTGGATACTGAGTGGGGTQACCCCAAGGAGAAAGACCGGACCA
 ATGAAAGAAATCAACCTTCTCTGACAGCTCATCCGTGGTTGTATCAGGACTTATGGCGG
 CCACCAAAATATGAAGTCACTGTCTATCTCTTAAAGACACTTTGACAAAGCAGACCAGCTCA
 GGGTGTGTCACCACTCTGGAGAATGTCAAGCCCAACCAAGAGGCTGGTGTGACAGATGC
 TACTGAGACCAACATCAACATTAGCTGGAGAACCAAGACTGAGACGATCACTGGCTTCCA
 AGTTGATGCGGTTCACGCCAATGGACCTCGGCGCGGACCAAGCTT

FIG. 15Y

16453.1.edit

ACCGTGGTCGGCGGCGGAGGTCTGGCCGAACTGCCAGTGTACAGCGAAGATGTACATGTTA
TAGNTCTTCTCGAAGTCCCGGGCCAGCAGCTCCACGGGGTGGTCTCCTGCCCTECAGGCGCT
TCTCATTTCTCATGGATCTTCTTCACCCGCGAGCTTCTGCTTCTCAGTCAGAAGGTTGTGTCC
TCATCCCTCTCATACAGGGTGACCAAGACGTTCTTGAGCCAGTCCCGCATGGCGCAGGGGGA
ATTGGGTACAGCTCAGAGTCCAGGCAAGGCGGGATGTATTTCGCAAGGCCCGATGTAGTCCA
AGTGGAGCTTGTGGCCCTTCTTGGTGCCCTCCAAAGGTGCACCTTTGTGGCAAAGAAGTGCCA
GGAAGAGTCGAAGGTCTTGTGTGTCATTGCTGCACACCTTCTCAAACCTGCCAATGGGGGCT
GGGCAQACCTGCCCGGGCGGCCGCTCGA

16453.2.edit

TCGAGCGGCGCGCGCGGCGCAAGGTCTGCCCCAGCCCCCATTTGCCGAGTTTGAGAAGGNGTGCA
GCAATGACAACAAGACCTTCGACTCTTCTGACACTTCTTTGCCACAAAGTGCACCCCTGGA
GGGCACCAAGAAGGGGCCACAAGCTCCACCTGGACTACA TCGGGCCTTCCAAATACA TCCC
CCCTTGCTTGAGCTCTGAGCTGACCGAATTCGCCCTGCCCATCGGGGACTGGCTCAAGAAC
GTCTGTGTCACCTGTATGAGAGGGATGAGGACAACAACCTTCTGACTGAGAAGCANAAG
CTGCGGGTGAAGAANAATCCATGAGAATGANAAGCGCTGNAGGCANGAGACCACCCCT
GGAGCTGCTGGCCCCGGCACTTCGAGAAGAACTATAACATGTACATCTTCTGTACACTGG
CAGTTGGGCTAGACCTCGCCCCGGGACCCCT

16454.1.edit

AGCGTGGNTGCGGACGACGCCCCACAAAGCCATTTGTATGTAGTTTTANTTCAGCTGCCAAAN
AATACGNCACCATCCACCTTACTAACCCAGCATATGCAGACA

16454.2.edit

TCGAGCGGTGCGCGCGCGGCGCAAGGTCTGCGGCGCATAGCACCGGCCATATTTTGGAAATGGATCA
GCTCTGOCAGCCTGACGAGCCGAGCCAGGACTTGGTCTTAGTTGAGCAATTTGCCCTAGDA
GGATAGTATGCCACACCTTCTGAGTCTGTGGATAGCTGCCATGAAAGNAACCTGAAGGA
GGCGCTGGCTGTANCCCTTGATTACAGGCTGGGAAACAGCTGTACACTTGGCATTCTCT
GCATATACTGONTAOTGAGCCGAGCTTGGCGCTCTTCTTGGCCTGAGCTAAAGCTACATA
CAATGGCTTTGNGGACCTCGCCCCGGGACCCCT

FIG. 15Z

16455.1.edi

TCGAGCGGCGCGCGCGGCGGCGAGGTCCATTTTCTCCCTGACGGTECCACTTCTCTCCAATCTTGT
 AGTTCACACEATTGTGATGACACCATCTAGATGAATCAGATCTGAAATGACCACTTCCAAA
 GCCTAAGCACTGGCACAACAGTTTAAAGCCTGATTGAGACATTCGTTCCCACTCATCTCCA
 ACGGCATAATGGGAAACTGTGTAGGGGTCAAAGCAGGAGTCATCCGTAGGTGTGTTCAAG
 CTTTCGTGACAGAAAGTTGCCACGGTAACAACCTCTTCCCGAACCTTATGCTCTGCTGGT
 CTTCGAAGTGCCTCCACTATGATGTTGTAGGTGGCACCTCTGGTGAGGACCTCGCGCCCGA
 CCACGCT

16455.1.edi

AGCGTGGTTTGGCGCGGAGGTCCCTCACCANAGGTGCCACCTACAACATCATAGTGGAGGC
 ACTGAAAGACCAAGCAGAGGCATAAGGTTCCGGGAAGAGGTTGTTACCGTGGGCAACTCTGT
 CAACGAAGGCTTGAACCAACCTACGGATGACTCGTCTTGGACCCCTACACAGNITCCCAT
 TATGCCGTTGGAGATGAGTGGGAACGAATGTCTGAATCAGGCTTTAAACTGTTGTGCCAGT
 GCTTANGCTTTGGAAGTGGTCAATTCAGATGTGATTTCATCTANATGGTGTGATGACAATGG
 TGNCAACTACAAGATTGGAGAGAGTGGNACCGTCAGGGGANAATAATGGACCTGCCCCG
 GCGGCNCGCTCGA

16456.1.edi

AGCGTGGTCCCGCCCGAGGTCTCGCTTCTGCTGANGTGAATTATCCTGAACCATCCAGGCC
 AAATAAGCOCGCCCTATGCCCTGATTCGATTGGCACACGGCTCAGATTGCAATGCAAGTT
 TGCTGAGCTCAAGGAAAGATTGATC

16456.2.edi

TCGAGCGCGCGCGCGCGGCGAGGTCCAAATGAAACAAACAGTTCTGAGACCGTTCTTCCACCA
 CTGATTAAAGAGTGGCGCGCGCGGTATTAGGGAATAATTCATTTAGCCTTCTGAGCTTTCT
 GGCAGACTTGCTGACTTCCCACTCCAGCAGCTTCTGCTCCACTGCTTTGATGACACC
 CACCGCAACTGTCTGTCTCATATCAGCAACAGCAAGCGACCCAAAGGTGGATAGTCTGA
 GAAGCTCTCAACACACATGGCTTGGCAGGAACCATATCAACAATGGCCAGCATCACCAG
 ACTTCAAGAAATTTAAGGCCCATCTTCACTTTTACCAGAACGGCGATCAATCTTTTCTT
 CAGCTCAGCAAACTTCCATCCAAATGTGAGCCG

FIG. 15AA

16459.1.edit

TCGAGCGGGCGGGCGGGCGGGCAGGTCCAGAGGGCTGTGCTGAAGTTTGCTGCTGCCACTGGAG
 CCACTCCAATTGCTGCCCCGTTCACTCCTGGAACCTTCACTAACCAGATCCAGGCCAGCCTT
 CCGGGAGCCACGGCTTCTTGTGNTACTGACCCCGAGGGCTGACCACCAAGCCTCTCAGCGAG
 GCATCTTATGTTAACTTACCTACCATTCGCGCTGTGTAAACACAGATTCTCCTCTGCCCTATGT
 GGACATTGCCATCCCATGCAACAACAAGGGAGGTCACCTCAGNCGGGTTTGATGTGGTGA
 TGCTGGCTCGGGAAATTTCTGCGCATGCGTGCCACCATTTCCCGTGAACACCCATGGGANGN
 CATGCCCTGATCTGGACTTCTACAGAGATCCTGAAGAGATTGAAAAAGAAGAACAGGCTGN
 TTGCTGANAAAACCAAGTGACCAAGGANGAAATTCANGGGGTGAAANGGACTGCTCCCGCT
 CCTGAATTCACTGCTACTCAACCTGANGNTGCAGACTGCTTGAAGONGNACANGGGCC
 CTCTGGGCCTATTTAAGCANCTTCGGTCCGGAACAGNT

16459.2.edit

AGCGTGNCTCGCGGGCGAGGTGCTGAATAGGCACAGAGGGCACCTGTACAACCTTCAGACC
 AGTCTGCAACCTCAGGCTGAGTAGCAGTGAACCTCAGGAGCGGGAGCAGTCCATTCAACCT
 GAAATTCCTCTTGGNCACTGGCTTCTCAGCAGCAGCCTGCTCTTCTTTTCAATCTCTTCA
 GGATCTCTGTAGAAGTACAGATCAGGCAATGACCTCCCATGGGTGTTACAGGGAAATGGTG
 CCACGCATGCCGAGAAGCTTCCCGAGCCAGCATCCACACATCAAAACCCACTGAGTGAGGT
 CCGTTGTGTTCATGGGATGGGCAATGTCCACATAGCCGAGAGGAQAATCTGTGTTACAC
 AGCGCAATGGTADGTAGGTTAACAATAAGATGCTTCCGCGAGAAGCTGGTGGTCAGCCCTG
 GGTCAAGTAACCAACAAGAGGCTGCTTCCCGGAAGGCTGCTGGATCTGGTTAGTGAA
 GGNTCCAGGAGTGAAACCGCGCAACAATTCAGTGGCTTCAGTGCCAAAGCAGCAAACTTCA
 GCACAAGCCCTCTGGAACCTGCCCCGCGCGCTCTGA

16460.1.edit

TCGAGCGGGCGGGCGGGCGAGGTCCAATTTCTCCTGACCGNCCCACTTCTGTCCAATCTTGT
 AGTTACACCAATTGTATGGGACCACTGTAGATGAATCACATCTGAAATGACCACCTTCCAAA
 GCTTAAGCACTGGCACAAAGAGTTAAAGCTGATTCAGACATTGTTTCCACTCATCTCCA
 ACGGCATAATCGGAAGCTGTGTACCGCTCAAAACAGGAGTCAATCCGTACGTTGGTCAAG
 CTTCTGTTGACAGAGTTGCGGACGGTAACTACCTGNTCCCGGAACCTTATGCTCTGCTGG
 GCTTTCAGNCCCTCCACTATGATGNTCTAGCGCGGGCACCTCTGNGANGACCTCGCGCGG
 GACCACCT

16460.2.edit

AGCGTGGCTCGCGGGCGAGGTGCTCAACAGAGGTGCTACCTACAACATCATAGTGGAGGCA
 CTGAAGACCAAGCAGAGGCATAGCGCTCGGGAAGAGGTTGTTACCGTGGGCAACTCTGT
 AAGGAAGGCTTGAACCAACCTACGGAATGACTCGTGCTTTGACCCCTACACAGTTTCCCAT
 ATGCCCTTGGAGATGACTGGGAACCAATGTCTGAATCAGCTTTAAACTGTTGTGCCAGTG
 CTANCGTTTGAAGTGGGTCAATTCAGATGTGATTCATCTAGATGGTGCCATGACAATGG
 NGNGAACTACAAGATTGGAGAGAACTGCAACCCGACGGGAGAAAAATGGAACCTGCCCCGG
 CGCGCGCTCGA

FIG. 15BB

16461.1.edi

AGCGTGGTCGGCGCCGAGGTCCACATEGGCAGGGTCGGAGCCCTGGCCGCCATACTCQAA
CTGGAATCCATCGGTCAATGCTCTGCCCGAACCAACATGCTCTTGTCTTGGGGTTCTTGC
TGATGTACCAAGTTCTTCTGGGCCACACTGGGCTGAGTGGGGTACACGCAAGGTCTCACCAGT
CTCCATGTTGCAGAAGACTTIGATGGCATCCAGGNTGCAACCTTGGTTGGGGTCAATCCAG
TACTCTCCACTCTTCCAGCCAGAGTGGCACATCTTGAGGTACGGCAGGTGCGGNCGGGG
NTTTTGGGGCTGCCCTCTGGNCTTCGGNTGNTCTGNATCTGCTGGCTCA

16461.2.edi

TCGAGCGCGCCGCCCGGGCAGGTCTCGCGGTGGCACTGGTGATGCTGGTCTGTGGTCCCC
CCGGCCCTCCTGGACCTCTTGGCCCCCTGGTCTTCCAGCGCTGGTTTCGACTTCAGCTTC
CTGCCCCAGCCACCTCAAGAGAAAGGCTCAGGATGGTGGCCGCTACTACCGGGCTGATGAT
GCCAATGTGGTTCTGTGACCGTGACCTCGAGGTGGACACCCACCTCAAGAGCCTGAGCCAG
CAGATCGAGAACATCCGGAGCCAGAGGCCAGNCGCAAGAACCCCGCCCGCAGCTGCCCT
GACCTCAAGATGTGCCACTCTGACTGGAAGAGTGGAGAGTACTGGATTGACCCCAACCAA
GCTGCAACCTGGATGCCATCAAAGTCTTCTGCAACATGGAGACTGGTGAGACCTGCCGTGA
CCCCACTCAGCCCAAGTGTGGCCCAAAAGAACTGGTACATCAGCAAGAACCCCAAGGACAA
GAAGCATGTCTGTTCTGGCCGAGAACATGACCGATGGATTCCAGTTGGAGTATGGCGGGCA
GGGCTCCGACCTGCCGATCGGGACCTTGGCCCGGAACACGCT

16463.1.edi

AGCGTGGNNGCGCCCGAGGTATAAATATCCAGNCCATATCTCTCCCTCCACACCGCTGANAG
ATGAAGCTGTNCAAAGATCTTAGGGTGGANAAAACCAT

16463.2.edi

TCGAGCGCGCCGCCCGGGCAGGTCTTTCAGACTTGGACTGTGTACACTGCCAGGCTTCCAG
GGCTTCAACTTGCAGACGGCTTCTGTGGGACAGTCTCTGTAAATGCCGAAAGCAACCATG
GAAGACCTCGGGGAAAACACEATGGTTTATCCACCTGAGATCTTGAACAACCTTCATCT
CTCAACCTCGGGAGCGAGGCTCTGGACTGGATATTGTACTCTGGCCCGGACCAACCT

FIG. 15CC

16464.1.edlt

CGAGCGGGCGACCGGGCAGGTNCAGACTCCAATCCANANAACCATCAAGCCAGATGTGAG
 AAGCTACACCATCACAGGTTTACAACCAGGCACTGACTACAAGANCTAGCTGCACACCTTG
 AATGACAATGCTCCGAGCTCCCCCTGTGGTCAATCGACGCTCCACTGCCATTGATGCACCAT
 CCAACCTGGCTTTCCCTGGCCACCACACCCAAATTCCTTGCTGCTATCATGGCAGCGGCCAGG
 TGCCAGGATTACCGGTACATCATCNAGTATGANAAGCCTGGGCTCCTCCAGAGAAAGNO
 GTCCCTCGCCCCCGCCCTGNTGTCCCANAGONTACTATTACTGNGCCNGCAACCGGCAACC
 GATATCNATTTTGNCAATTGGCCTTCAACAATAATTA

16464.2.edlt

AGCGTGCTTCGGCGCCGANGTCTGTGAGAGTGGCACTGGTAGAAGTTCAGGAACCGTG
 AACTGTAAGGGTTCTTCAACAGNCCCAACAGGATGACATGAAATGATGTACTCAGAAGTG
 TCTTGAATGGGGCCCATGAGATGCTTGTCTGAGAGAGAGCTTCTTGNCTGTCTTTTCC
 TTCCAATCAGGGGCTCGCTCTTGTGATTAATGTTCAAGGGCAATGACATAAAATTGTATATTGG
 GGTCCCGGNTCCAGGCCAGTAATAAGTANCCCTCTGTGACACCAGGGCGGNGCCGAGGGACC
 ACTTCTCTGGGAGGAGACCCAGGCTTCTCAACTTGATGATGTAACCGGTAATCCTGGCAC
 GTGGCGGCTGCCATGATACCAAGCAAGCAATTGGGGTGTGGTGGCCAGGAAACCGAGGTTG
 GATGGNGCATCAATGGCAGTGGAGGCTCTGATGACCCACAGGGGGAGCTCCGACATTGTC
 ATTCAGGCTG

16465.1.edlt

AGCGTGGNCGCGGCCGAGCTCCAGCGCGGCTGTGCCACCTTCTGCTCTCTCCCCAAGCAT
 AAGGAGGGTNCCTCCCCCAGGAGAACATTAACTNTCCGAGCTCGGCTGTGGCGG

16465.2.edlt

TGGAGCGCCCGCCCGGCCAGGTTTTTCTGCAAGTGGNTACTTTATTGNTGGGAAAG
 GGAGAAAGCTGTGGTCAAGCCCAAGACGGCAATACAGAGNCCGAAAAAGGGGAGCGCCAGGT
 GGGCTGGAAGCAGACCCAGGGCAGGCAAACTTCTCTCTCACTGCTCAAGCTGGTG
 GTGGCTGGAGCTCAVAAATTGGGAGTGACAGAGCACACCTTCCCAAGCCATTGGGGCGG
 CATTTCACTCTGGCCAGGACACTGGCTGTCAGCTGGCACTGGTCCCGACAGAAAGCTGGAGC
 TGGGGAAGTTAAATGTTCACTTGGGGGCAAGCACTCTCTTATCATTONGCAGAGAGCAG
 AAGGTGGCACAGCCCCGCTCTGACCTCGGGCTGGACCAAGCT

16466.1.edlt

TGGAGCGCCCGCCCGGCCAGCTCCACCATAAAGTCTGATACAAGCAGCGGATGAGCTGTCA
 GGAGCAAGGTTGATTTCTTTCAATGCTGGGNCCTTCTCTTGGGCGNCAACCGCACTGAT
 ATCCAGTGAGCTGAACATTGGGTGGCTCCACTGGCGCTCAGGCT

16467.1.edlt

TGGAGCGGTTTCGGCCCGGCCAGGTCCACCAAGCCAAATTCCTTGGCTGATCATGCCAGCGG
 CCAGGTGCCAGGATTACCGGCTATATCATCAAGTATGACAAGCCTGGGTCTCTCCAGAG
 AAGCGGTCCCTCGGCCCCCGCTGGTGTCAAGAGGCTACTATTACTGGCCTGGAACCGGG
 AACCGAATATACAAATTAATGTCATTGNCCTCAAGAAATAATCANVAAAGCGANCCCTGA
 TTGGAAGGA

FIG. 15DD

06_16471.edit

AGCGTGGTCGCGGCGCGAGGTCTGCTGCTTCAGCGAAGCGTTTCTGGCATAACCAATGATA
 AGGCTGCCAAGACTGTTCCAATACCAGCACCAGAACCGCACTCCTACTGTTGCAGCAC
 CTGCACCAATAAATTTGGCAGCAGTATCAATGTCTCTGCTGATTGCACTGGTCTGAAACTC
 CCTTTGGATTAGCTGAGACACACCAATTCTGGGCGCTGATTTTCCTAAGATAGAACTCCAAC
 TCTTTGCCCTCTAGCACATAGCCATCTCTCGGTACACTGTCCCGGCTTGAAGCGATGC
 ACCCAAGAAGCTTTCCTTGGTGAAGTCTCTCCAGGAGACTGCTGATTTTGGCAITCTT
 TTTCCITTCATCATAATTTCTCTGAATTTTATAGATCGTTTTTGTTTAAATCTCTTCTTCC
 TCAGGAGTCAGCTTGGCCCCCGCCCATCCACACAGTCCGTGTGCGGGGAGGTAACAAGA
 AATACCTTGGCTTGAGGTGGACGTGGGGAATTTCTCTGGGGCTCAGAGTGGTGTACTCG
 TAAACAAGGATCATCGATGGTGNCTACAATGCATCTAATAACGAGCTGGGTCCGACCCA
 AAGAACCTGGNGAANAATAATGGATCGNCTCATCGACAGGACACCGTACCCGACAGGGGNA
 CGANTCCCACTATGCGCTTGGCCCTGGGCGGCAANAAGGAAACTGCCCGGGCGGCCNT
 CGAAAGCCCAATTNTGGAAAAATCCATCACACTGGGNGGCCNGTCCAGCATGCATNTAN
 AGGGGCCCCATCCCCCTNAXN

07_16472.edit

TCGAGCGGCGCGCGCGCAAGTCCCAACCAAGGCTGCAACCTGGATGCCATCAAAGTCT
 TCTGCACATGGAGACTGGTGAGAGCTGGGTGTACCCCACTCAGCCCAAGTGTGCGCCAGA
 AGAACTGGTACATCAGCAAGAACCCCAAGGACAAGAAGCATGTCTGGTTGGCGAGAGCA
 TGACCGATGGATTCCAGTTCAGTATCGCGGCCAAGCGCTCCGACCTGCCGATGTGACCT
 CCGCGCGGACCAAGCT

08_16472.edit

AGCGTGGTCGCGGCGCGAGGTCCACATCGCGAGGCTCGGAGCCCTGGCCGCCATACTCGAA
 CTGGATCCATCGGTGATGCTCTCCCGCAACAGACATGCCCTCTTGTCTTGGGTTCTTGC
 TGATGTACCAAGTCTCTCTGGGCGACACTGGCGTGAAGTGGCGTACACCGACGCTCTCACCAGT
 CTCCATGTTGAGAAAGACTTTGATGGCATCCAGGTTCAGGCTTGGTTGGGGACCTGCCCG
 GCGGCGCGCTCGA

09_16473.edit

TCGAGCGGCGGCGCGCGCGAGGTCCACACACCCAAATTCCTTGGTATCATGGCAGCCCG
 CACGTGCCAGGATTACCGGCTACATCATAGTATGAGAAGCCTGGGTCTCCTCCCAAGAA
 AGTGGTCCCTCGGCGCGCGCGCTGGTCTCACAGAGGCTACTATTACTGGCCTGGAACCGGGA
 ACCGAATATAAATTAATGTGATGCTGCTGAAAGAAATATCAGAAGAGCGAGCCCTGATTC
 GAACGAAAAAGACAGACGAGCTTCCCAACTGGTAAGCTTCCACACCCCAATCTTCAATG
 GACCAAGAGATCTTGGATGTTCCTTCACAGTTCAAAAGACCCCTTTGGTCACCCACCTTGG
 GTATGACACTGGAAATGGTATTCAGCTTCTGCGCACTTCTGCTCAGCAACCCAGTGTGGG
 CAACAAATGATCTTTGACGAACATGGNTTACGCGGACCAACCGCCCAACAGCGGCCACC
 CCGATAAGGCAAGGCCAAGACCAATACCCCGCGAATGTAGGACAAGAAGCTNTNTNTCAN
 ACACCATNTNATCGCGCGCGCAATCCAGGACACTTCTGAGTACATCAATTAATGNCATCTGTGG
 CACTTGAATGAAAGCCCTTACAGTTCAGGCTTCTGGAATTTTACCAGCCCTNTTACAGGAC
 TNGGCGCGGACNCTTAAGCENATTCACCTTGGCGCTTCTANGGTCCCACTCGNNCACTG
 GNGAAAAATGGCTACTGTN

FIG. 15FF

11_16474.edi

AGCGTGGTCCGGCCGAGGTCCACTAGAGGTCTGTGTGCCATTGCCAGGCAGAGTCTCTG
 CGTTACAAACTCCTAGGAGGGCTTGTCTGTGGGAGGGCCTGCTATGGTGTGCTGCGGTTCA
 TCATGGAGAGTGGGGCCAAAGGCTGCCGAGGTTGTGGTGTCTGNCAAACTCCNAGGACANG
 AGGGCTAAATTCCATGAAGTTTGTGGATGGCCTGATGATCCACAAATCGGAGACCCGTGTAA
 CTACTACCGTCNACCNCTGCTGTNCNCCCCNTTCTGCTNAANACATNGGGNTNNTNC
 TTGNCCNTCTTGGGTNGAANATNNAATNGCCTNCCCNNTTNTANENCTACTNONTCCANA
 NTTGCCCTTAAANAATCCNCTTGCCTTNNNCACTGTTCAANNNTNTTNTTGTAAACCCCT
 ATNANTTNATTANAATNTNNTNNTNCTCACCCCCTENTCATTNANCCNATANGCTNNNA
 ANTCTTNANNCTCCCNCCNNTNCTNTACTNANTNCTTCTNCCCATTAACNNAGCT
 CTTCNTTTAANATAATGNNGCCNNGCTCTNCAINTCTACNATNTGNNAATNCCCCCNCC
 CCGNANCGNNTTTTGGACCTNNNAACCTCCCTTCTCTTCCCTNENNAATNCCNNTTCC
 NENTTCCNNTTTCGGNTNNTCCCATNCTTCCANNMCTTCAANTCTANENCTNCAACT
 TATTTCTCTNCTATCCCTTNTTCTTACANNCCCCCTNNTCTACTNNGNNTTNCATTANAT
 TTGAAACTNCCACNCTANTNCCCTGCTCTACNNTTTATTTTNGGNTGCTCTACNTAAT
 ANTTAATNANTTNTCN

12_16474.edi

TCGAGCGGCGCGCGCGGAGGTCTGCGCAAGGAGAGCCCTGTTATGCTGTGGGACTGGCTG
 GGGCATGGCAGCGCGCTCTGCTTCCCACTCTTCTGTTCTGAGATGGGGGTGGTGGGCACT
 ATCTCATCTTTGGGTTCCCAATGCTCAGCTGCTCAGGCAGGGGCTTCTTAGGGCCAATCT
 TACCACTTGGGTCCGAGGCGAGCATGATCTTCACTTGAATGCCAGCACACCCGTGTCTGAG
 CAACAGGTGGCCCAAGGCACTCTCAAGCTAGTAAGTTAACAGGGGTCTCCGCTGTGATC
 ATCAGGCCATCCACAACTTCAATGCAATAGCCCTCTGTCTCTGGAGTTTCCAGACACCA
 CAACCTCCAGGCTTTGGGCTCACTCTCATGATGAACCGGAGGACACCATACAGGGCTT
 CCGCACAAAGGCGCTCTAGGAATTTGTAAACGCAANACTCTGCTGCCAATGGCACAC
 AAACCTCTAAGTGCAGCTCGGCGCGGAGCTACCC

13_16475.edi

TCGAGCGGCGCGCGCGGAGGTCTGCGCAAGGAGAGCCCTGTTATGCTGTGGGACTGGCTG
 CAGACTTGACATCATATGAATCATAGCTGGGAGCAATAGTTCTGAGGACCACTAGGGCATG
 ATTACAGATTCCAGCGGCGCGGAGGAGCAACAGGGGAGCCCTGCTTGTCTTGGAAATACAG
 GGTACCATTTCTCCAGGCAATACAGGAGGCGCTTGAATCTGCTTGGGCGCTTGGAGGTCC
 TTGACCAATTAGGAGGGGAGTACGAGCACTTGGAGGCTGTGGGCAAACTGCACAACTTC
 TCCAAATGGAATTTCTGGGTGGGCACTTAATTTCTGATCGGTACATATTATGTCTATCG
 CAGAGAACGATCTGTAGTCAACACACATATTTGGCATGCTTCTGGCTTCCAGACATCTC
 TATCCGNCATAGGACTGACCAAGATGCGCAACATCTCTCTCAACAAGCTTNTGTTGTGCC
 AAAAATAATAGTGGGATGAAGCAGACGAGAGTANCCAGGCTCCCTTTTCCACAAAGC
 NTCATCATGTCTAAATATCAGACATGAGACTCTTTGGGCAAAAAGGAGAAAAAGAAAA
 AGCAGTTCAAAATANCNCCATCAAGTTGGTTGCTTCCCTNTTCAAGCACCCCGGGCCCTT
 ATAAAACACTNCGGCGCGGAGCCCTT

FIG. 15GG

14_16475.edi

AGCGTGGTCCGGCCCGAGGTGTTTTATGACGGGCCCCGGTGCTGAAGGGCAGGGAAACA
 TGAATGGTCTACTTTGAAGTGGTTTTCTTTCTCTTTTGCACAAAGAGTCTCATGTCTGA
 TATTTAGACATGATGAGCTTTGTGCAAAAGGGGAGCTGGCTACTTCTCGCTCTGCTTCATC
 CCACTATTATTTTGGCAACAACAGGAAGCTTTGAAAGGAGGATGTTCCCATCTTGGTCACTC
 CTATCCGGATAGAGATGTTCTGGAAAGCCAGAACCATGCCAAATATGTGTCTGTGACTCAGG
 ATCCGTTCTCTGGCATGACATAATATGTGACDATTCAAGAATTAGACTGCCCAACCCAGAA
 ATTCCATTGGAGAAATGTTGTGCACTTCCCAACAGCTCCAACTGCTCTACTCGCCCTCC
 TAATGGTCAAGGACCTCAAGGCCCAAGGGAGATCCAGGCCCTCTGGTATTCTGGGGAG
 AAATGGTGACCTGGTATTCCAGGACAACAGGGTCCCTGGTTCTCTGGCCCCCTGGA
 ATCNGNGAATCATGCCCTACTGGTCTCTAAACTATTCTCCANATGATTGATATGATGTC
 AAGTCTGGGATAGCNAGTANGGANGGACTCCAGGCTATTCTGGACCANACCTGCCCGGG
 GGGCTTCGAAAGCCCCGAATCTGCANANTNCTTCACACTGGCGGCCCTCGAGCTGCTTT
 AAAAGGCCCAATCCNCTTTAGNNGGGGGANTACAATTACTNGCGCGCTTTTANANG
 CGNNGCTGGGAAAT

15_16476.edi

AGCGTGGTCCGGCCCGAGGTCCAGATCCGCAGGGTCCGAGCCCTGCCCOCCATACTCGAA
 CTGGAATCCATCGGTCACTCTCTGCGGGAACAGACATGCTCTTTGTCTTTGGGGTTCTTGC
 TGAATGACCACTTCTCTCTGGGCAACACTGGGCTGAGTGGGGTACACGCAAGTCTCACCAOT
 CTCCATGTTGCAAGAGACTTTGATGGCAATCCAGTTGCAAGCTTGGTTGGGTCATCCAG
 TACTCTCACTCTTCCAGTCAGASTGGCAGATCTTGAAGTCAAGGCAAGTCCGGCCGGGT
 TCTTGGGGCTGCCCTCTCGGCTCCGATGTTCTCGATCTGCTGGCTCAGGCTCTTGAAGGGTG
 GTCTCCACCTCGAGGTCAAGGTCAAGAACCAATGGCATCATCAGCCCGGTAGTAGCGGC
 CACCATGCTGAGCTTCTCTTGANCTGGCTGGGGCAAGCAACTGAAGTCGAAACCAAGCCT
 GGGAGGACCAAGGGGACCAANAGGTCAAGCAAGGCCCGGGGGGACCAACAGGACCAAG
 CATCACCAAGTGGGACCCCGGAGAACTTCCCGGCCCGCCCTCGAA

16_16476.edi

TCGAGCCNNCCCGCCCGGCAAGCTCTGGCGGTCCACTCGTGAATGCTGGTCTCTTGGTCCCC
 CCGCCCTCTCTGGACCTCTCTGOTCCCTCTGGTCTCCAGCCCTGGTTTCGACTTCAGCTTC
 CTGCCCCAGCCACCTCAAGAGAAAGCTCAGGATGOTGGCCCTACTACCCGCTGATGAT
 GCCAAATGCTGCTGATGAGCTGAGCTGAGGTGACACCACTCAAGAGGCTGAGCCAG
 CAGATCGAGAAATCCGGAGCCGAGAGGGCCAGCCGCAAGAACCCCGCCGCACTGCGGT
 GACCTCAAGATGTTCCACTCTGACTGGAAGAGTGGAGATGACTGATTGACCCCAACCAA
 GGCTGCAAGCTGGAATGCCATCAAGCTTCTGCAACATGGAGACTGGTGAGACCTGCGGTG
 ACCCCACTCAGCCCACTGTGGCCAGAGAACTGCTACATCAGCAAGAACCCCAAGGACA
 AGAGCCAATGTGTGTTGGGCAAGCAATGAGGATGGATTCCAGTTGAGATGGCGGCC
 AGGCTTCCACCTGCGGATGTGGACCTCTGGCCCGGACCACTT

FIG. 15HH

17_16477.m41x

TGAGCGCGCGCGCGCGCGCAGGNTGNNAAAGCTGGTCTGTGCTGCTCTCTCTGCGCAAGGCTG
GTGAAGATGGTCACCTCGGAAAACCGGACGACCTGGTGAGAGAGGAGTTGTTGGACCAC
AGGGTCTCTGTGGTTTCCCTGGAACTCTGGACTTCTGTGCTCAAAGGCAATTAGGGGACA
CAATGGTCTGGATGGATTGAAGGGACAGCCCCGGTGTCTCTGTGTGGAAGGCTGAACCTGG
TGCCCTGTGTGAAAATGGAACTCCAAGGTCAAACAGGAAGCCCGTGGGCTTCTGTGGTAGAG
AGGACCGGTGTTGGTGCCCTTGCCCANACCTCGCGCGCGACACGCTAAGCCCGAATTTC
AGCACACTGGNGGCGGTTACTANTGGATCCGAGCTCGGTACCAAGCTTGGCGTAATCATG
GTCAAGCTGTTTCTGTNGTGAAAATGTTATCCGCTCACAATTTCACACANCAATACGAAGC
CGGAAAGCATAAAGTGTAAGGCTTGGGGTGCTAATGAGTGAGCTAACTCNCATTAATTT
GCCTTGCGTCACTGCCCCGCTTTTCCANNNGGGAAACCNTEGCTNNGCNGCTTGCTNTAA
NTGAAATCGCCNACCCCTCGGGGAAAAGNCGGTTTGGNGTATTGGGGCNCCTTTTCTCTTT
CTCGGNTACTTGANTTANTGGCTTTGCGCGNTTCGGGTTGNGGGGANGNGGTTCAACN
TCACNCAAAGNGGNAANACGGTTTCCANAAATCCGGGGGNTANGCCAAANGNAAAAC
ATNNGNCYAANGGCT

18_15477.cd3c

AGCGTGGTTNCGCGCGGAGGCTGTGGGECAGGGGCACCAACAGGTCTCTCTCACCAGGAA
GCCACGGGCTCTGTGTGACCTGGAGTTTCATTTTACCAGGGGOCACCAGGTTGACCGTT
CACAGCAGGAGCACCAGGCTGTCTCTTCAATCCATCAGACCAATTGTGNCCTTAATGCT
TTGAAGCCAGGAAGTCCAGGACTTCCAGGGAAGCAGCAGCAGCAGCCTGTGGTCCAAACAAC
TCTCTCTCACCAGGCTGTCTGGGT.TTCCAGGCTGACCATCTTCCAGCAGCTTCCAGGA
GCACCAGCAGGACCAAGCTTACCAAGCTCTCTGGGGGGGGGGCTCGA

21_10479.qxd

TCGAGCGCCCGCCCGGGCAGGTCCATTTCTCGGTGACGGTCCCACTTCTCTCCAATCTTGT
AGTTGACACCATTGTCAATGCCACCACTCTAGATGAATCAGATCTGAAATGACCACCTTCCAAA
GCTAAGCACTCGGCACAACAAGTTTAAAGCTTGATTCAGACATTCGTTCCCACTCATCTCCA
ACGGCATAATGGGAAACTGTGTATGGGCTCAAAAGCAGGATCATCCGTAGGTTGGTTCAAG
CTTCGTTGACAGAGTTGCCCAAGCTAACAAGCTCTTCCGGAAGCTTATGCCCTCTGCTGGTC
TTTCAGTGCCTCCACTATGATGTTCTAGCTGGCACCTCTGGTGAGGACCTCGCCCCGAC
AGGCT

22_16479.djit

ACGGTGGTCCGGCCGAGGTCTCACCAGAGGTGCCACCTACAACATCATAGTGCAGGCA
CTGAAAGACCAACACAGGCATAAGGTCGGGAAGAGGTTGTATTACCGTGGGCACTCTGTC
AACGAAGGCTTGAACCAACCTACGGATGACTCTGTGCTTTGACCCCTACACAGTTTCCCAT
ATGCCCTTCGAGATGAGTGGGAACGAATGCTGAAATCAGGCTTAAACTGTTGTGCCAGTG
CTTAGGCTTGAAGTGGTCAATTCACAGATGTGATTATCTAGATGGTCCCATGACAAATGG
TGTGAAGTACAGAGATTGGAGAGAAAGTGGACCCCTACGGGAGAAAATGACCTGCCCGGG
CCGGCCCGCTGA

FIG. 15D

24-16480,ed1c

TCGAGCGMNCGCCCGGGCAGGTCCAGTAGTGCCTTCGGGACTCGGTTACGCCCCAGGTCTG
CGGCAGTTGTACAGCGCCAGCCCGCTGCCCTCCAAAGCATOTGCGAGGACAAAATGGCA
CCGAGATATTCCTTCTGCCACTGTTCTCTACTGTTGATGTCTTCCCATCATCGTAAACACGT
TCCCTCATGAGGGGTACACACTTGAAATCTCTCTTTTCGTTCCCAAAGACATOTGCGAGCTCATTT
GGCTGGCTCTATAGTTTGGGAAAGTTTGTGAAACTGTGCCACTGACCTTTACTTCTCTCT
TCTTACTGGAGCTTTCGTACCTTCCACTTCTGCTGTTGGTAAAAATGGTGAATCTTCTATCA
ATTTCAATGACAGTACCCACTTCTCCCAAACATCCAGGGAATAGTGATTTACAGCGGATT
AGGAGAACCAAAATATGGGGCAGAAATAAGGGGCTTTTCCACAGGTTTCTCTTGGAGGA
AGATTTCAGTGGTGACTTTAAAAGAATACTCAACAGTGTCTTCAATCCCATAGCAXAAAGAA
GAAACNGTAAATGATGGAANGCTTCTGGAGATGCCNMCAITTAAGGGAACNCCAGAACTT
CACCATCTACAGGACCTACTTTCAGTTTACANNAAGNCACATANTCTGACTCANAAAAGGAC
CCAAAGTAGCNCCATGGNCAGCACTTTNAGCTTTCCTGGGGAAAANNNTACNTTCTTAA
ANGCTNCGCCNNGACCCCTTAAAGNCCAAATTNITGGAAAANTTCNTNCCNCTGGGGGGC
NGTTTACATGCTTTTNAAGGGCCCCAATTNCCCTT

25_16487.edir

TCGAGCGGGCCCGCGGGCCAGGTGTCTCGAGTCCAGCAACGGGAGCGCGTGGTCTTGTAGTTGT
TCTCGGGCTCCCAATTGCTCTCCCACTCCACGGCCATGTGCTGGGATAGAAGCCTTTGAC
CAGGCAGGTACCGCTGACCTCGCTCTGCTCATCTCTCCCGGATGGGGCCAGGGTGTAC
ACCTGTGGTTCTCGGGCTCGCCCTTGGCTTGGAGATGGTTTCTCGATGGGGCTGGGA
GGGCTTTGTTGGAGACCTTGCACCTGTACTCTTCCCAATCAGCCAGTCTGGTGCAGGAC
GGTGAGGACGGTCACTACACGGTACGTGCTGTGTACTGCTCTCCCGCCGCTTGTCTTG
GCATTATGCACCTCCACGGCTCCAGCTAGGAGTTCAACTTGCCTCAGGCTCTTGTGCTGC
TCACCTCCACGACCAAGCAATGTAAGCTCAGACCTCGCGCGGACCAAGCT

26_16491.edjir

ACCGTGCTCCCGCCCAAGCTCTGAGCTTACATGCCGTGGTGGTGGACGTGACCCACGAAGA
CCCTGAGGTCAAGTTCAACTCTGACGTGCAAGCCCGTGGAGGTGCATTAATGCCAAGACA
GCCCGCGGAGGAGCACTACAAAGCAAGCTACCGGTGGTCAAGCTCTCACCCTGCTGCA
CCAGGACTGGCTCAATGCCAAGCAGTACAAGTCCAAAGCTCTCCAAACAAGCCCTCCCAAC
CCCCATCGAGAAACCATCTCCAAAGCCAAAGGGCAAGCCCGGAGAACCAACCAAGGTOTACA
CCCTGCCCCCAATCCCGGGAGCAGATACCAAGAACCAAGGTCAAGCTGACCTGCTGCTCA
AAGCTTCTATCCCAAGGACATCCCGGTGGAGTGGCAGAACAAAGGGCAGCCGAGAGA
ACTACAAGAACACCCCTCCCTGCTGAGCTCGACACCTGCCCGGGGGGGGGCTGGA

2-16483-3d/r

TCGAGCGCGCCGCCCGGGCAGGTTGCAATGGCTCTCTCGCTGACCAACCCCGGTTGCTGGTGGTG
GTACAGAGCTCCGATGGGTCAAAACCATTCAGATAGAACTGTCTCTGTCCAGGOTGTAGG
GGCCGAGCTCACTGATGCCCTGGGTCACTTGGCTCACTTCCAGTACACCCGCTCTCTGTG
CAGTCCAGGGGCTTTTGGGCTCAGGACCATGGGTCCAGACAGCATCCACTCTGGTGGCTGC
CCATCTCTTCTCAGGGCTCAGCAAGGTCAGTCTGCAACCAAGATACAGACGCTGACACT
GGTGTCTTGAACAAGGGCATAAAGCAGACCTGAAGGACACCTCGGCCCGCGACCACT

FIG. 15JJ

23_16482.edit

AGCGTGGTGGCGCCGAGGTGTCTTCAAGGTTGCTTATGCCCTTGTTCAGAAGACACCAG
 TGTCAGCTCTCTGTACTCTGGTTCCAGACTGACCTTGTCTAGGCCCTGAGAAGGATGGGGCA
 GCCACCAGAGTGGATGGTGTCTGCACCCATCCCTGACCCCAAAAGCCCTGGACTGGACA
 GAGAGCGGCTGTACTGGAAGGTGAGCCAGCTGACCCACGGCATCACTGAGCTGGGGCCCT
 ACACCTTGGACAGGGACAGTCTCTATGTCAATGCTTTCACCCATCGGAGCTCTGTACCCAC
 CACCAGCACCGGGGTGGTCAOCCAGGAGCCATTCAACTGCCCGGGGGGGCGCTCGA

29_16483.edit

AGCGTGGTGGCGCCGAGGTGTCTTCAAGTGGCACTGGTAGAAGTTCCAGGAACCCCTGA
 ACTGTAAGGGTTCTTCAACGTGCCAAGAGGATGACATGAAATGATGTACTCAGAAGTGTG
 CTGGAATGGGGCCCCATGAGATGGTGTCTGAGAGAGAGCTTCTTGTCTTACATTCCGGCGGG
 TATGGTCTTGGCTATGCCCTATGGGGGTGCCCCCTTGTGGCGGTGTGGTCCGCCCTAAAC
 CATGTTCTTCAAAAGATCATTTGTGGCCCAACACTGGGTGCTGACCAGAAAGTCCAGGAAG
 CTGAATACCATTTCCAAGTGTCAACCCAGGGTGGGTGACGAAAGGGGTCTTTTGAAGTGTG
 GAAGGAACATCCAAGATCTCTGTGTCATGAAGAATGGGGTGTGGAAAGGGTTACCAGTTGG
 GGAAGCTCGTCTGTCTTTTCTCTCCAAATCAGGGGCTGGCTCTTCTGATTAATCTTCAGGGC
 AATGACATAAAATGTATAATCGGTCCCGGTCCAGGCCAAGTAATAGTAACCTCTGTGACAC
 CAGGGCGGGGGCGAGGGACCTTCTTTCGAAAGAGACCAAGCTTCTCATACTTGATGATGA
 GNCGGTAATCTGTGGCACGTGONGGTTCATGATGCCACCAAGGAAAATGGNCGGGGNG
 GACCTGCCCGGGGGCGGTTCNAAACCCCAATTCACACACTTGGNGGCCCTACTATGGATC
 CCACTCNOTCCAACCTTGGNGGAATAAGCCATAACTTTT

31_16484.edit

TGAGCGGGCGGGCGGGGAGGTCTTCACTTTTACCAAGTGGGAAGGTGTAATCCGTCT
 CCACAGACAAGGCCAGGACTGGTTGTATCCGTTGATGATAGAAATGGCGTACTGATGCAA
 CAGTTGGGTAGCCAAATCTGCGAGACAGACACTGCAACATTCCGGACACCTTCCAGGAAGC
 GAGAAATGCAAGATTCTCTGTGATATCAAGCACTTCAGGTTGTAGATGCTGCCATTGTC
 GAACACCTCTGGATGACCAGCCCAAGGAGAAAGGGGAGATGTTGAGCATGTTCAOCCAO
 CGTGGCTTCCCTGGCTCCCACTTTGTCTCTAGCTTTGATGACAGCTCCGGCCGACCAAGCT

37_16487.edit

AGCGTGGTGGCGCCGAGGTGTCTTCAAGTGGCACTGGTAGAAGTTCCAGGAACCCCTGA
 GTGACCGTGGCGCTCCAGCAACTTCCGCCAGCAGACCTACACCTGCAACGTAGATCACAAGC
 CCAGCAACACCAAGGTGGACAAAGAGACTTCAAGCCCAATCTTTGTGACAAAATCACAAT
 GCGCACCGTGGCGAGCAGCTCAACTCTCTGGGGGAGCTCACTCTTCTCTTCCCGGCAT
 CCGCTTCCAAAAGCTGCCCGGGGGGGGGGGTGG

FIG. 15KK

33_16487.edit

CGAGCGGCGGCGCGGCGGCGAGGTTTGGAAAGGGGGATGCGGGGGAAGAGGAAGACTGACGGT
CCCCCAGGAGTTCAAGTGCTGGGACGGTGGGCATGTGTGAGTTTGTGACAAGATTGG
GCTCAACTCTCTTGTCCACCTTGGTGTCTCTGGGCTTGTGATCTACCTTGCAGGTGTAGGTC
TGGGTGCGGAAGTTGCTGGAGGGCACGGTCACCACTGCTGAGGGAGTAGAGTCCTGAG
GACTGTAGGACAGACCTCGGCGCGGACCACT

39_16488.edit

NGGNNGGTCCGONCNGNCAGGACCACTCTCTTCGAAATA

41_16489.edit

AGCGTGCTCGCGGCGGAGGTCTCACTTCCCTCCGCAAGCACCGATAGCTGCGCTCTGG
AAGCCGAGATCTCTTTAAAGTCTTGAGCAATTTCTCGCACCAAGCGCTGGAAGGGAAAGTT
TGCGAATCAGAAGTTCAGTGGACTTCTGATAACGTCTAATTTGACCGAGCGCCACAGTACC
AGGACCTGCGCGGCGCGGCGGCTCGA

43_16489.edit

TGGAGCGGCGGCGGCGGCGGAGGTCTCTGTAAGTCTGCGGCGGCTCGGCAAAATTACAGCTTATCA
GAAGTCTCACTCAACTCTGATTCGGAAGTCTGCTTCCAGCGCTCTGGTCCGAGAAATTGCT
CAGGACTTTAAAAGAGATCTGCGCTTCCAGAGCGGCACTATCGGTCTTTCAGGAGGCA
AGTGAGGACCTCGGCGGCGGAGCACT

45_16491.edit

TGGAGCGGCGGCGGCGGCGGAGGTCTCACTGCGGCGGCTCGGAGGCTCTGCGGCGGCACTCTG
AACTGGAATCCATCGGTCTATGCTCTCGGCGGAAACAGAGATGCTCTTGTCTTGGGGTTCT
TGCTGATGTACCACTCTCTTCTCGGCGGCACTGCGGCTGAGTGGGTACAGCGAGGTCTCACC
AGTCTCCATGTTGCAGAAGACTTTGATGGCATCCAGTTGCAAGCTTGGTTCGGGTCAATC
CAGTACTCTCCACTCTTCCAGTCAAGTGGCACAATCTTGAGGTCACGCGAGGTGCGGCGGCG
GGTTCTTGACCTCGGCGGCGGAGCACT

FIG. 15LL

46_16491.cdlr

GTGGGNTTGAACCCNTTTNANCTCCGCTTGGTACCGAGCTGGGATCCACTAGTAACCGCCG
 CCACTGTGCTGGAAITCGGCTTAGCGTGGTCCGGCCGAGGTCAAGAACCCCGCCGAC
 CTCCCGTGACCTCAAGATGTGCCACTCTGACTGGAAGAGTGGAGAGTACTGGATTGACCC
 CAACCAAGGCTGCAACCTGGATGCCATCAAGTCTTCCCAACATGGAGACTGGTGAGAC
 CTGGCTGTACCCCACTCAGCCCACTGTGGGCCAGAGAAGTGGTACATCAGCAAGAACCC
 CAAGGACAAGAAGCATGTCTGTTCGGCCGAGAGCATGACCGATGGATTCCAGTTGAGTA
 TGGCGGCCAGGGCTCCGACCTGCCGATGTGGACCTGCCCGGGCGGCCCTCGA

47_16492.cdlr

AGCGTGGTCCCGGCCGAGGCTGTGGGATGCTCCTGCTGTACAGTGAGATATTACAGGATC
 ACTTACCGAGAAACAGGAGGAAATAGCCCTGTCCAGGAGTTCAGTGTGCTGGGAGCAAG
 TCTACAGCTACCATCAACCGCCCTTAAACCTGGAGTTGATTATACCATCACTGTGTATGCTG
 TCACTGGCCGTGGAGACACCCCGCCAAAGCAAGCCAAATTCATTAAATTACCGAACAG
 AAATTGACAAACCATCCAGATGCCAGTACCAGATGTTCCAGGACAACAGCAATTAGTGTCA
 AGTGGCTGCTTCAAGTTCCCTGTACTGTTACAGAGTAACCACTCCCAAAAATGG
 ACCAGGACCAACAAAACTAAAACTGCAAGGTCCAGATCAAAACAGAAATGACTATTGAAG
 GCTTCCAGCCCAAGTGGAGTATGTGGTTAAGTGTCTATGCTCAGAAATCCAAGCGGAGAG
 AAGTCAGCCTCTCTGTTCACTGNAAGTAACCAATTTGATCCCTAAAGGACTGGCAATC
 ACTGATGNGGATCCCGATTCCATCAAAATTENTTGGGAAAACCCACAGGGGCCAAGTTTC
 ANGTGAGGNGGAGCTACTGAGCCCTGAGGATGGAAATCCTTGAATNTTCTTTCCTGAT
 GGGCAAAAAAAGCTTCAAAAGTTGAAAGGACCTCCCGGGCGCCGTNCAAAACCCAATT
 CCACCCCTTGGCGGCTTCTATGGGNGCCACTCCGACCAAACTTGGGGTAA

48_16493.cdlr

TCCAGCGCCCGCCCGCCAGGCTCTTCCAGCTCTCCAGTGTCTCTTCCACCATCAGGTGCA
 GCGAATAGCTCATGGATTCCATCTCTCAGGCTCCAGTAGGTCAACCTGTACCTGCAAACTT
 GCCCTGTGGGCTTCCCAAGCAATTTCTATGGAATCGGCAATCAGATCAAGTGAATCCCA
 TCTTACGGCCATCAATGTTGTTACTCCAGTCTGAACCAAGGCTGACTCTCTCCGCT
 GGAATCTGAGCAATAGACACTAACCACTACTCCACTGTGGGCTGCAACCCCTCAATAGTCA
 TTTCTTTTGTCTCGACCTCCAGCTTTAAGTTTGTGTTGTTCTCTGGTCCATTTTGGGAGTG
 GTGGTACTCTGTAAACCAAGTAACACGGGAATTTGAAGGCAGCCACTTGACACTAAATGCTGT
 TOTCTGAAACATCCGTCACCTTCCATCTGGGATGCTTTCTCAATTTCTGTTCCGTAAATTAT
 GAAATTOGCTTCTCTCTTCCGGGCTTGTCTCCAGGCCAGTGACAGCATACACAGTGATG
 GTATAATCAACTCCAGGTTTAAAGCCCTGATGGTAAGTGAATCTTCTCCAGGCACAACT
 GAACTCTGACAGGCTATTTCTCTCTTCTCTCCGTAAGTGAATCTGTAAATCTCACTGGG
 ACAGCAAGGAGGATTCAAAAGTTCCGGCCGACCCCTAAGCCGAATTTNGCAATATNC
 ATCACTCTGGCGGGGCTCGACATTCATTAAGGCCCAATCNCCTATAGGGAGTNT
 ANTACAATTG

FIG. 15MM

49_16493.edit

TCGAGCGGGCGCGCGCGGGCAGGTCACTTTTGGTTTTTGGTCAITGTTGGGTTGGTCAAAGATA
 AAAACTAAGTTTGAGAGATGAATGCCAAAGGAAAAAATATTTTCCAAAGTCCATGTGAAA
 TTGTCTCCCATTTTTTGGCTTTTGAGGGGGTTTCAGTTTGGGTTGCTTGTCTGTTTTCCGGGT
 GGGGGGAAAGTTGCTTGGGTGGGAGGGCAGCCAGGTTGGCA TGGAGGCAGTTTACAGGAA
 GCAGACAGGGCCAACGTCT

55_16496.edit

AGCGTGCTCGGGGCGGAGGTCTCACCAGAGGTGCCACCTACAACATCATAGTGGAGGCA
 CTGAAAGACCAGCAGACGCATAAGGTTCCGGGAAGAGGTTGTTACCGTGGGCAACTCTGTCT
 AACGAAGGCTTGAACCAACCTACCGATGACTCGTCTTTGACCCCTACACAGTTTCCCAT
 ATCCCGTTGGAGATGAGTGGGAACGAATGTCTGAATCAGGCTTAAACGTGTTGTGCCAGTG
 CTTACGCTTTGGAAAGTGGTCAATTCAGATGTGATTCATCTAGATGGTGGCATGACAATGGT
 GTGAACCTACAGATTGGAGAGAAAGTGGGACCGTCAGGGAGAAAAATGGACCTGCCCCGGC
 GGCCGCTCGA

36_16496.edit

TCGAGCGGGCGCGCGCGGGCAGGTCTCAATTTCTCCCTGACGGTCCCACTTCTCTCCAATCTTGT
 AGTTACACCAATTGTCACTCCACCACTAGATGAATCAGATCTGAAATGACCACTTCCAAA
 GCCTAAGCACTGGCACAACAGTTTAAAGGCTGATTCAGACA TCGTTCCCACTCATCTCCA
 ACGGCATAATGGGAAGCTGTGTACGGGTCTAAAGCAGAGTCATCCGTAGGTTGCTTCAAG
 CCTTCGTTGACAGAGTTGCCCCACGCTAAAGCACTCTTCCCGAAGCTTA TCCCTCTGCTGCT
 TTTCACTGCCCTCCACTATGATGTGTAGCTGGCACCTCTGCTGAGGACCTCGCCCGCGGACC
 ACGCT

39_16498.edit

TCGAGCGGGCGCGCGCGGGCAGGTCTCACTAAGTCTCTGATACAACCACCGAATGAGCTCTCA
 GGAGCAAGGTTGATTTCTTTCA TGGTCCGGTCTTCTCTTGGGGGTCAACCCCACTCGATA
 TCCAGTGACCTGAACATTCGCTGTCTCTCACTGGGCGCTCAAGCTTGTGGGTGTGACCTGA
 GTGAACCTCAGGTCACTTGGTCCAGGAA TACTGCTTACTGCACTCTGAACCAGAGGCTGA
 CTCTCTCCGCTTGGATTCTGAGCATAGACACTAACCACATACTCCACTGTGCGGTGCAAGC
 CTTCAATAGTCATTTCTGTTTGAATCTGCACTTGCAGTTTACTTTTGTGCTCTCTGCTCCAT
 TTTTGGGAGTGGTCTTACTCTGTAACTGCTACACGGGAACCTTGAAGGCAGCCACTTGAC
 ACTAATCTGTTGTCTGAAACATCGGTCCTTCTCATCTGGATCGTTTGNCAATTTCTGTTT
 GGTAA TAAATCGAATTTGGCTTCTCTCTTCCGGGCTGTCTCCAGGGCCAGTGACAGCATA
 CACAONGATCGNATNATCAACTCCAAGTTTAAAGCCCTGATGGTAAGTTTAAACTTGGCTCC
 CAGCCAGNGAACTTCCGGACAGGGTA TTTCTCTGCTTTTCCGAAONGANGCTGGAATNN
 TCTCTTGGANGACAAGGANGNTCCAAAACCTTGGCCCGGAACCCCTT

FIG. 15.VV

60_16473.adit

AGCGTGCTCCCGGCEGAGGTCTGTGACAGTGGCACTGGTAGAAGTTCCAGGAACECTGA
 ACTGTAAGCGTTCCTTCATCACTGCCAACAGGATGACATGAAATGATGTACTCAGAAAGTGT
 CTGGAAATGGCGCCCATGAGATGGTTGTGTGAGAGAGAGCTTCTGTCTACATTCCGGCGGG
 TATGGTCTTGGCTATOCCTTATGGGGCTCCCTTTGTGGGGCGGTGTGGTCCGCTAAAAC
 CATGTTCTCAAAAGATCATTTTGTGCCCCAACACTGGGTTGCTGACCAGAAAGTCCAGGAAG
 CTGAAATACCATTTCCAGTGTCTATCCAGGGTGGGTGACGAAAGGGGTCTTTTGAAGTGTG
 GAAGGAACATCCAGATCTCTGGTCCATGAAGATTGGGCTGTGGAAGGGTTACCACTTGG
 GGAAGCTCGTCTGTCTTTTCCCTTCCAAATCAGGGGCTCGCTCTTCTGATTATTTCTTCAGGGC
 AATGACATAAAATTGTATATTCGGTTCCGGTTCAGGGCAGTAATAGTAGCCTCTTGTGAC
 ACCAGGGGGGGGGCCANGGACCCTTCTGTTGGANGAGACCCAGCTTCTCA7ACTTGTATGAT
 GTAACCCGGTAATCTGTGACGTGGCGGCTGNCATGATACCANCAAGGAATTGGGTGNGN
 GGACCTGCCCGGGCGGCGCTCNA

60_16498.adit

AGCGTGCTCCCGGCEGAGGTCTGTGAGTGGTCTGTGTCACAGTGAATATTACAGGATC
 ACTTACGGAGAAACAGGAGGAAATAGCCCTGTCCAGGAGTTCACTGTCCCTGGGAGCAAG
 TCTACAGCTACCATCAGCGGCTTAAACCTGGAGTTGATTATACCATCACTGTGTATGCTG
 TCACTGGCGGTGGAGACAGCCCGCAAGCAGCAAGCCAAATTTCCATTAAATACCGAACAG
 AAATTOACAAACCAATCCACATGCAAGTGAACCAATTTCAAGGACAACAGCAATAGTGTCA
 AGTGGCTGGCTTCAAGTTCCGCTGTACTGCTTACAGACTAACCACTCCCAAAAATGG
 ACCAGGACCAACAAAACCTAAAACCTCCAGCTCCAGATCAAAACAGAAATGACTATTGAAG
 GCTTGCAGCCCAAGTGAAGTATGTGCTTACTGTCTATGCTCAGAAATCCAAGCGGAGAGA
 GTCAGGCTCTGCTTCAGACTGCACTAACCACTATTCCTCCACCACTGACCTGAAGTTCACT
 TCAAGGTCAAGCAACCAAGCTGAGCCGCTCACTGAGACCAACCAATGTTCACTCACTGAT
 ATCGAGTCCGCTGAGCCGCAAGGAGAAAGACCCGACCCATGAAGAAATCAACCTTCT
 CCTGACAGCTCATCGGNGGCTGTATAGGACTTATGGGGGACTGCCCCGGCGNGGCCONT
 GAAANGGAATTNTGAAATTTCTTCTGACTGGGNGGCCONTTCAAGCTTNTTANANGCC
 CGAATTGNCCTNTAONGGCTCTN

61_16499.adit

AGCGTGCTCCCGGCEGAGGTCTGAGG

62_16483.adit

TCCAGCCCCCGCCCCCGGAGGTCCACTACACCAATTCCTTCTGCTATCA7GGCAGCCGG
 CAGGTGCCAGGAATACCGGCTACATCATCAAGTATGAGAAGCCTGGGTCTCTCCCAAGAGA
 AGTGGTCCCTCGCCCCCGGCTGTGTGTACAGAGGCTACTATTACTGGGCTGGAAACCGGGA
 ACCGAATATACAAATTTATGTCAATGGCTTGAAGAATAATCAGAAAGAGCGAGCCCTGATTC
 GAAGGAAAAGACAGAGGAGCTTCCCAACTGCTAACCCCTCCAGACCCCAATCTTTCATG
 GACCAGAGATCTGGATCTTCTTCCAGCTTCAAAAGACCCCTTTGCTCAGCCACCCTGG
 CTATGACACTCCAAATGGTATTCAGCTTCTGGCACTTCTGCTCAGCAACCCAGTGTTCGG
 CAACAAATGATCTTTGACGAACATGGTTTATGCCCCGACCAACCCGCCCAACCGGGCAAC
 CCCATAAGGNATAAGCCCAAGACCATACCCCGCCGAATGTAGGACAAGAAAGCTCTNCTCA
 ACAACCATCTCATGCCCCCAATCCAGGACACTTCTGAGTACATCAATTCATGTCAATCTG
 GTGGGCACTTGAATGAANAACCCCTTACAGTTCAAGGTTCTGGAAGTTCTACCAONGGCCACT
 TCTGACAGGANCYTTGGCGNGACCACT

FIG. 1500

63_16500.edit

AGCGTGGTGGCGGCGGAGGTCCATTTCCTCCCTGACGGTCCCACTTCTCTCCAATCTTGTAG
TTCACACCATGTGTCATGGCACCATCTAGATGAATCACAATCTGAAATGACCACTTCGAAAGC
CTAAGCACTGGCACAACAGTTTAAAGCCTGATTGAGAGATTGTTCCCACTCATCTCCAAC
GGCATAATGGGAAACTGTGTAGGGGTCAAAGCAGGATCATCCGTAGGTTGTTCAAGCC
TTCGTTGACAGAGTTGCCCAACGGTAACAACCTCTTCCCGAACCTTATGCTCTGCTGGTCTT
TCAGTGCCTCCACTATGATGTTGTAGGTGGCACCTCTGGTGAGGACCTGCCCGGGCGGCGCC
GCTCGA

64_16493.edit

AGCGTGGTGGCGGCGGAGGTGTGCCCCAGACCAAGGAATTCGGCTTCGACGTTGGCCCTGTC
TGCTTTCCTGTAAACTCCCTCGATCCCAACCTGGCTCCCTCCCAACCAACTTTCCTCCCG
AACCCGGAAACAGACAAGCAACCCAACTGAACCCCTCAAAAAGCCAAAAAATGGGAG
ACAATTTACATGGACTTTGGAAAATATTTTTTCTTTGCAATTCATCTCTCAAACTTAGTT
TTTATCTTTGACCAACCGAACATGACCAAAAACCAAAAGTACCTGCCCGGGCGGCGCTC
GA

64_16500.edit

TCCAGCGGCGGCGGCGGAGGTCTCAGAGAGGTGCCACCTACACATCATAAGTGGAGG
CACTGAAAGACCAAGCAGAGGCCATAGGTTTCGGGAAGAGGTTGTTACCGTGGGCAACTCTG
TCAACGAAGGCTTGAACCAACCTACCGATGACTCGTGTCTTGACCCCTACACACTTCCCA
TTATGCCGTTGGAGATGAGTGGGAACGAATGTGTGAATCAGGCTTTAAACTGTTGTCCAG
TGCTTAGGCTTTGGAAGTGGTCATTCAGATGTGATTCATCTAGATGGTGGCAATGACAATG
GTGTGAACCTACAGATTGGAGAGCACTGGGACCGTCAGGCGAGAAATGGACCTCGGCGG
CGACCAACCT

FIG. 15PP

16501.1.edit

TGGAGCGGCGCGCGCGCGCGCGAGGTACCGGGGTGGTCAGCGAGGAGCCATTTCAGACTGAACTT
CACCATCAACAACCTGCGGTATGAGGAGAAACATGCAAGCACCTGGGTCCAGGAAGTTCAA
CACCGCGGAGAGGGTCTTCAGGGCGCTGCTCAGGTCCCTGTTCAAGAGCACCACTGTTGGC
CCTCTGTACTCTGGCTGCAGACTGACTTTGCTCAGACCTGAGAAACATGGGGCAGGCCACTG
GAGTGGACGCCATCTGCACCGTCCGCTTGATCCCACTGGTNCCTGGACTGGACANANAGCG
GCTATACTTGGAGCTGANCENAACTTTGGCGGNGACNCCNCTT

16501.2.edit

GAGGACTGGCTCAGCTCCCACTATAGCCGCTCTCTGTCCAGTCCAGGACCAGTGGGATCAA
GGCGGAGGGTGCAGATGGCGTCCACTCCAGTGGCTGCCCATGTTTCTCAAGTCTGAGCAA
AGNCAGTCTCCAGCCAGAGTACAGAGGGCCAACTGGTCTCTTGAACAGGGACCTGAG
CAGGCCCTGAAGGACCTCTCCGTGGTGTGACTTCTGGAGCCAGGGTGGTGCATGTTT
TCTCATAACCGCAGGTTGTTGATGGTGAAGTTCACTGTGAATGGCTCTCTCGCTGACCACCC

16502.1.edit

AGCGTGGTCCCGCGCGGAGGTCCACCCACCCCAATTGCTTGGTGGTATCATGGCAGCCCGCA
CGTCCAGGATTACGGGCTACATCATCAAGTATGAAAGCCCTGGGTCTCTCTCCAGAGAA
GTGCTCCCTCGGCGCGCGCGCGCGCGGTGGTGCACAGAGGCTACTATTACTGGCTGGAAACCGGAA
CCGAATATACAATTTATGTCATTGCGCTGAAAGATAATCAGAAAGCGGAGCCCTGTGATTGG
AAGGAAAGAGACAGACGAGGCTTCCCACTGGTAACCTTCCACAGCCCAATCTTCATGG
ACCANANANCTTGGATNGTCTTTCACTGCTTNAAGAAAGCCCTTTCGGCGCGCGCGCGCGCG
GGGATTAACTTGGCGAAANGGGGATTTNACCTTCC

16502.2.edit

TGGAGCGGCGCGCGCGCGCGAGGTCTCTCTCAGAGTGGCACTGGTAGAAGTTCCAGGAACCTT
GAACTGTAAAGGCTTCTTCATCAGTGGCAACAGGATGACATGAATGATGTACTCAGAAGT
GTCTTGGAAATGGCGCGCGCGCGCGCGGTGGTGTGAGAGAGAGCTTCTTGTCTTACATTGCGC
GGGTATGGTCTTGGCGCTATGCTTATGGGGGTGGCGTTCTTGGCGCGGTGTGGTCCGCTAA
AACCATGTTCTCAAAAGATCAATTTGTTGCCCAACACTGGCTTGGTGGACAGAACTGCCAGG
AAGCTGAATACCATTTCCAGTGTCACTGAGGCGGCGGTGACCAAAGGGCGCTCTTTGA
CCTGCGNCAAGGAAACCATCCAAAANCTCTGNCCTATG

FIG. 150Q

16503.1.edt

AGCGTGCGCGCGCGGAGGTCTGAGGATGTAACTCTTCCAGGGGAAGGCTGAAOTGCT
GACCATGGTGGTACTGGTCCCTTCTGAGTCAGATATGTGACTGATGNGAACTGAAGTAGGT
ACTGTAGATGGTGAAGTCTGGGTGTCCCTAAATGCTGCATCTCCAGAGCCTTCCATCATT
CCGTTTCTTCTTTTCTATGGGATGAGACACTGTTCAGTATTCTCTAAAGTCACCACTGAAA
TCTTCTCCAAAGGAAAAGCTGTGGAAAAGCCCTTATTCTGCCCCATAATTGGTTCTCC
TAATCCTCTGAAATCACTATTTCCTGGAANGTTGGGAAAAANNCGGCNACCTGNCAN
TGGAAANTGGATANAAAGATCCCACCATTTCACCCAAACNAGCAGAAAGTGGGAANGGTAC
CGAAAAGCTCCAAGTAANAAAAAGGACGGGAAGTAAAGGTCAAAGTGGGCACCAGTTTCAA
ACAAAACCTTTCCCCAACTATANAACCCA

16503.2.edt

AAGCGCGCGCGCGCGGAGGTCAGTGGCTTCCGGACTGGGNTCAGCCOCAGGTCTGC
GGCAGTTGTACAGCGCGCAGCCCGCTGGGCTCCAAAGCATGTGCAGGAGCAAATGGCAC
CGAGATATTCCTTCTGCCACTGTTCCTCTACGTGGTATGTCTTCCCATCATCGTAACACGT
CCCTCATGAGGGTCACACTTGAATTCTCTTTCCTTCCCAAGACATGTGCAGCTCAATTG
GCTGGCTCTATAGTTTGGGGAAAAGTTTGTGAACTGTGCTGCTGACCTTACTTCTCTCT
CTCTACTGGAGCTTTCCTTACCTTCCACTTCTGCTGNTGONAAAAAGGGNGGAACNTCTTA
TCAATTTGATTGACAGTANCCCNCTTCTNCCCAAACA TNCAGGGAAAAATATTGATTN
CNAGAGCGGATTAAGGAACAACCCNAATTATCGGGGCCAGAAATAAAAGGGGCTTTTCCA
CAGGTNTTTTCT

16504.1.edt

TGGAGCGCGCGCGCGGAGGTCTGCAGGCTATTGTAAAGTGTCTGAGCAGATATGAGAT
AACCTGGGCCAAAGCTATGATGTTGGATACGTTAGGTGTATTAAATGCCACTTTTGAAGTCCA
TCTCAGTGGATGACAGCCTTCTCAGTGACAGCAGACATCTTCTCACTGTGCTGAGTGGGCA
GGAGAAAGAGACATGCTGCCAGTGCACCTTGGCGCGCGACCAAGCT

16504.2.edt

AGCGTGCTCGCGCGCGGAGGTCCAGTCCAGCATGCTCTTCTCTGCCCCACTGCCACAGTG
AGGAAGATCTCTGCTGTGAGTGAAGGCTGTATCCACTGAGATGGCAATCAAAGTGC
ATTAAATACACCTAACGTATCGAACAATCAAGCTTGGCCCCAGGTTATCTCATATGTGCTCA
GAACACTTACATAGCTGACACCTGCGCGCGCGCGCGCTCGA

FIG. 15RR

16505.1.edit

CGAGCGGGCGGCGGGGCAAGGTCCAGACTCCAATCCAGAGAACCACCAAGCCAGATGTCAG
 AAGCTACACCATCACAGGTTTACAACCAAGGACTGACTACAAGATCTACCTGTACACCTTG
 AATGACAAATGCTCGGAGCTCCCTGTGGTCAACGACGCTCCACTGCCATTGATGCACCAT
 CCAACCTGCGTTTCTGGCCACCACACCAATTCTTGTGGTATCATGGCAGCCGCCAGG
 TGGCAGGATTACCGGCTACATCATCAAGTATGAGAAAGCTGGGTCTCCTCCAGAGAAGT
 GGTCCCTCGGCCCCCGCCCTGGTGNACAGAAAGCTACTATTACTGGCCTGGAACCGGGAACC
 GAATATACAATTTATGTCAATTGCCCTGAAGAATAATCANAAGAGCGAGCCCTGATTGGA
 AGG

16505.2.edit

AGCGTGGTCCGCGGCCGAGGTCTGTGAGAGTGGCACTGGTAGAAGTTCCAGGAACCCCTGA
 ACTGTAAGGGTTCTTCATCAGTGCCAAACAGGATGACATGAAATGATGTACTCAGAAAGTGT
 CTGGAATGGGGCCCATGAGATGGTGTCTGAGAGAGAGCTTCTTGTCTGTCTTTTCTCTTC
 CAATCAGGGGCTCGCTCTTCTGATTATTCTTCAGGGCAATGACATAAAATTGTATATTGGTT
 CCGGTTCCAGGCCAGTAATAGTAGCCTCTGTGACACCAGGGCGGGGCGGAGGGGAGGAGT
 TCTCTGGGAGGAGACCCAGGCTTCTCATCTTGTATGATGTANCCGGTAATCCTGGCACCCT
 GCGGCTGCCATGATACCAAGCAAGGAATTGGGTGTGGTGGCCAAAGAAACGCAAGTTGGAT
 GGTGCATCAATGGCAGTGGAGGCGGTGATNACCACAGGGAGCTCCGANCATTGTCAATC
 AAGGTGGACAGGTAGAAATCTTGTATCAGGTGCTCTGGTTTGTAAACCTG

16506.1.edit

TGGAGCGGGCGGCGGGGCAAGTTTCTGTACGCTGACCTGGAGGTGGACAGGACCCCTCAAG
 AGCCTGAGCCAGCAGATCGAGAACATCGGAGCTCAGAGGGCAGCCGCAAGAACCCCGC
 CCGCACCTGCCCTGACSTCAAGATGTCCCACTGTGACTGGAAGAGTGGAGAGTACTGAT
 TGACCCCAACCAAGGCTGCAACCTGGATGCCATCAAAATCTTCTGCAACATGGAGACTGCT
 GAGACCTGCTGTACCCCACTCAGCCCACTGTGGCCCAAGAAAGAACTGGTACATCAGCAAG
 AACCCCAAGGACAAGCAAGCATGTCTGCTGGGGCAAGCATGACCCATGGATTCCAGTTC
 GAGTATGGCGGCCAAGGCTCCGACCTCCCGATGTGGACCTCGGCGCGGACCAAGCTAAG
 CCGCAATTCCAGCAACTGCGCGGCTTACTAGTGGATCCGAGCTTCGGTACCAAGCTTG
 GCGTAATCATGGGNCATAGCTGTTTCTGNGTGAATAATGCTATTCCCGTTCACAAATTTCC
 AC

16506.2.edit

AGCGTGGTCCGCGGCCGAGGTCCAGACTCCAATCCAGAGAACCACCAAGCCAGATGTCAG
 CTGGAATCCATCGGTCATGCTCTGCGGCAACCAGACATGCTCTTGTCTTGGGGTTCTTGC
 TGATGTACCACTTCTTCTGGGCAACTGCGCTGAGTGGGTACACCGAGGTCTCACCAGT
 CTCCATGTTTCCAGAAAGACTTGAAGCATCCAGGTTCCAGCCTTGGTTGGGCTCAATCCAG
 TACTCTCCACTCTTCCAGTCAAGATGGCACATCTTGAGGTACCGCAGGTGCGGCGGGGT
 TCTTGGCGCTGCGCTCTGGGCTCCGATGTTCTGATCTGCTGGCTCAAGCTCTTGAAGGGT
 GGTGTCCACCTCGAGGTCACGCTCACCAACCTGCGCGGCGGCGGCGGCTCGA

FIG. 15SS

16509.1.edi

AGCGTGGTCCCGGCGGAGGTCTGGGATGCTCCTGCTGTACAGTGAGATATTACAGGATC
 ACTTACGGAGAAACAGGAGGAAATAGCCCTGTCCAGGAGTTCACTGTGCTTGGGAGCAAG
 TCTACAGCTACCATCAGCGGCTTAAGCTGGAGTTGATTATACCATCACTGTGTATGCTG
 TCACTGGCGGTGGAGACAGCCCGCAAGCAGCAAGCCAAATTTCCATTAAATTACCGAACAG
 AAATTGACAAACCATCCAGATGCAAGTGAACGATGTTTCAGGACAACAGCATTAGTGTCA
 AGTGGCTGCCCTTCAAGTTCCTCTGTTACTGGTTACAGAAAGTAACCACCCTCCCAAAAATG
 GACCAAGACCAACAAAACTAAAACTGCGAGTCCAGATCAAAACAGAAAAATGACTATTG
 AAGGCTTGCAGCCCAAGTGGAAAGTATGTGGNTAGGNGTCTATGCTCAGAAATCCCAAGCC
 GGAGAAAGTCAGCCTTCTGCTTTAGACTGCAGTAACCAACATTGATCGCCCTAAAGGACT
 GGNCATTCACTTGGATGCTGGATGTCCAATC

16509.2.edi

TCGAGCGGCGCGCGCGGAGGTCTTTCAGCTCTGCAAGNCTCTTCTTCACCATCAGGTGCA
 GCGAATAGCTCATGGATTCCATCGTCAAGGCTCGAGTAGGTACCCCTGTACCTGGAAACTT
 GCGGCTGTGGGCTTTCCCAAGCAATTTTGATGGAAATCGACATCCACATCAGNCAATGCCAG
 TCTTTAGGGCGATCAATGTTGGTTACTGCACTGTGAACCAAGAGGCTGACTCTCTCGGCTT
 GGATTCTGAGCATAGACACTAAGCAGATACTCCACTGTGGGCTGCAAGCCTTCAATAGTCA
 TTTCTGTTTGATCTGGACCTCCAGTTTAAAGTTTGGTGGTCTGNCCTGNCCTTTTGGGAAG
 TGGGGGCTTACTCTGTAAACAGTAACAGCGGGAAGTTGAAGGCAGCCACTTGACACTAATG
 CTGTTGCTCTGACATCGCTCACTTGAATCTGGGATGCTTTTGACAAATTTCTGCTTGGCA
 AATTAATGGAATTTGGCTTCTGCTTGGCGGCGCTGNCCTCCAGCGGCGCACTGACAGCATA
 C

16510.1.edi

TCGAGCGGCGCGCGCGGAGGTCTTTCAGCTCTGCAAGNCTCTTCTTCACCATCAGGTGCA
 GCGAATAGCTCATGGATTCCATCGTCAAGGCTCGAGTAGGTACCCCTGTACCTGGAAACTT
 GCGGCTGTGGGCTTTCCCAAGCAATTTTGATGGAAATCGACATCCACATCACTGTAATGCCAG
 TCTTTAGGGCGATCAATGTTGGTTACTGCACTGTGAACCAAGAGGCTGACTCTCTCGGCTT
 GGATTCTGAGCATAGACACTAAGCAGATACTCCACTGTGGGCTGCAAGCCTTCAATAGTCA
 TTTCTGTTTGATCTGGACCTCCAGTTTAAAGTTTGGTGGTCTGNCCTGNCCTTTTGGGGAAG
 GGGGTGCTTACTCTGTAAACAGTAACAGCGGGAAGTTGAAGGCAGCCACTTGACACTAATG
 CTGTTGCGCTGAAACATCGGCTCACTTGAATCTGGGATGCTTTTGCTCAATTTCTGTTGGTAAT
 TAATGGGAATTTGGCTTACTGGCTTGGCGGCGCTGTCTCCAGGNCAGTGACAAACATAC
 ACAGGNGATGGGTATAATCAACTCCAGCTTTAAGGCCNCTGATGGTA

16510.2.edi

AGCGTGGTCCCGGCGGAGGTCTGGGATGCTCCTGCTGTACAGTGAGATATTACAGGATC
 ACTTACGGAGAAACAGGAGGAAATAGCCCTGTCCAGGAGTTCACTGTGCTTGGGAGCAAG
 TCTACAGCTACCATCAGCGGCTTAAGCTGGAGTTGATTATACCATCACTGTGTATGCTG
 TCACTGGCGGTGGAGACAGCCCGCAAGCAGTAAGCCAAATTTCCATTAAATTACCGAACAG
 AAATTGACAAACCATCCAGATGCAAGTGAACGATGTTTCAGGACAACAGCATTAGTGTCA
 AGTGGCTGCCCTTCAAGTTCCTCTGTTACTGGTTACAGAAAGTAACCACCCTCCCAAAAATG
 GACCAAGACCAACAAAACTAAAACTGCGAGTCCAGATCAAAACAGAAATGACTATTG
 AAGGCTTGCAGCCCAAGTGGAAAGTATGTGGNTAGGNGTCTATGCTCAGAAATCCCAAGCC
 AGAGAGTCAGCCTTCTGCTTTAGACTGCAGTAACCAACATTGATCGCCCTAAAGGACT

FIG. 15UU

16511.1.edit

TCGAGCGGCGCGCGCGGCGCAGGTCAGCGCTCTCAGGACGTCACCAACCATGGCCTGGGCTCT
 GTCCTCTCTCAGCGCTCTCTACTCAGGGCACAGGGTCTGGGCGGAGTCTGCCCTGACTCAG
 CTTCCCTCCGCGTCCGGGTCTCTCTGGACAGTCAGTCACCATCTCTGCACTGGAAACCAAGCA
 CTGACGTTGGTGTCTTATGAATTTGTCTCTGGTACCAACAACACCCAGGCAAGGCCCCCAA
 ACTCATGATTTCTGAGGTCACCTAAGCGCGCCTCAGGGGTCTCTGATCGCTTCTCTGGCTCC
 AAGTCTGGGAACACCGGCTCTCTGACCGTCTCTCTGGGTCCANGCTGAGGATGANGCTGATT
 ATTACTGGAAAGCTCATATGCCAGGCAACAACAATTGGGTGTTGGCGGGAAGGGACCAAGCT
 GACCGTCTTAAGGTCAAGGCCAAGGCTTCCCGCCTCGGTCACTCTGTTCCACCCCTCTCT
 GAAGAAGCTTTCAAGCCAAACAANGNCACACTGGGTGTGTCTCATAAGTGGACTTTCTACCC

16511.2.edit

AGCGTGGTCCGCGCGGAGGTCTGTAGCTTCTGTGGGACTTCCACTGCTCAGGCGTCAGGCT
 CAGGTAGCTGCTGGCGCGGTACTTGTGTTGCTTGTGNTTGGAGGGTGTGGTGGTCTCCACT
 CCGGCTTGACGGGCTGCTATCTGCTTCCACGGCACTCTCAGGCTCTCCGGGTAGAAAGT
 CACTTATGAGACACACCAAGTGTGGGCTTGTGGCTTGAAGCTCTCAGAGGAGGCTGGGA
 ACAGAGTGACCGAGCGGCGGACCGCTTGGGCTGACCTAGGACGCTCAGCTTGGTCTCTCCG
 CGAACACCCAAATTGTTGTTGCTTGCATATGAGGCTGCACTAATAATCAGGCTCATCTCAGC
 CTGGAGCCCGAGAGACNGTCAAGGGAGGCTCGTGTGTTGCCAAGACTTGGAAAGCCAGANAAG
 CGATCAGGGAGCCCTGAGGCGCGCTTTAGNGACCTCAAAAAATCATGAATTTGGGGGGC
 TTTGCTTGGGNGTTGGTGGTACCGAGNAAACAAAATTTTATAAAGCAGCAACGTCCT
 GCTGGTTTCCAGTGCAANGAANATGGTGAAGTGAANTGTC

16512.1.edit

AGCGTGGTCCGCGCGGAGGTCTCAGGACGTCACCAACCATGGCCTGGGCTCTGGTCTATCCC
 TTTCTTTTGTGGCTGAAACCAATGTCATCAATTCGAGTAGCAGAACTGCGGTCTCTACTG
 CTGTCTTATAAGTCTGACAGCTTCAACAGGCAATGGCTCCCATATGCCAGTTCTTTCATGTCC
 ACCAAAGTACCGCTCTCAGCAATTAACAGGCGAGGTCTCAGAGTTCTCTGGGTGTGCTTGG
 CCGGAAGCGAGGTAAAGTANAGGATCGTCTCTGCTCCACAGTTCTCGATCAGGGTACGAG
 GAATGACCTTAGCGGCTGGGCAACAGGCTCTATGCACTGCGCGGCGCGGCTCGCTC
 GA

16512.2.edit

TCGAGCGGCGCGCGCGGAGGTCTCAGGACGTCACCAACCATGGCCTGGGCTCTGGTCTATCCC
 TTGTACCTGATCCAGAACTGTGGAACAGGACCATCGCTCTACTTACCTCCCTTCGGGCGC
 AAGCACACCCAGGAGAACTGTGAGACCTGGGCTGTAATCGNGAGACCGGCTACTTTGGTG
 GACATGAAGGAAGTGGGATATGGGACCCATGGCTGNGAAGCTGCAACTTATAAGACA
 GCAGTGGAGACGGCAGTTCTGCTACTGCAATTGATGACATCGTTTCAGGCCAGAAAAAG
 AAAGGCGATGACCANAGCGCGCAAGCGCGCGCTTCTCTGATGCTGACCTCGCGCGCGGAC
 CACGCTT

FIG. 13VV

16514.1.edlt

AGCGTGGTCCCGGCCGAGGTCCACTAGAGGTCTGTGTGCCATTGCCCAGGCAGAGTCTCTG
CGTTACAAAGTCCTAGGAGGGCTTGGCTGTGCCGAGGGCCCTGCTATGGTGTGCTGGCGTTCA
TCATGGAGAGTGGGGCCAAAGGCTCCGAGGTTGTGTGTCTGGGAACTCCGAGGACAGA
GGGCTAAATCCATGAAGTTTGTGGATGGCCTGATGATCCACAGCCGAGACCCCTTTAACTA
CTACGTTGACACTGCTGTGCCCCAGCTTTGCTCANACAGGGTGTGCTGGGCATCAAGGTG
AAGATCATGCTGCCCTGGGACCCANCTGGCAAAAAATGGCCCTTAAAAACCCCTTCCCTG
ACCACGTGAACCAATTTGTGNGAACCCCAAGATGAANATACTTCCCACCACCCGCCATTG

16514.2.edlt

TGAGCGGGCCCGCCGGGCAGGTCTGCCAAGGAGACCCGTATTGCTGTGGGCACTGGCTG
GGGCATGGCAGGCGGCTCTGGCTTCCACCCCTTCTGTTCTGAGATGGGGTGTGTGGCAGT
ATCTCATCTTTGGGTTCCACAA TGCTCACGTGGTCAGGCAGGGGCTTCTTAGGGCCAACTCT
TACCACTTGGGTCCGAGGGCAGCATGATCTTTCACCTTGATGCCCAGCACACCCCTGTCTGAG
CAACACCTGGCGCACAGCAGTGTCAACGTAGTAGTTAACAGGGTCTCCGCTGTGGATCAT
CAGGCCATCCACAAACTTCATGGAATAGCCCTCTGTCTCGGAGTTTCCC.AAAACACCAC
AACCTGCCCAGGCTTTGGGCCCCACTTCTTCATGAATGAACCCGAGCACACCAATTANCAA
GGCCCTTCCGCACAGONAAAGCCCTTCTTAAGGAGTTTGTAAACCGAA.AAAACTCTTCCCT
GGGGCAAAATGGGCACACAGACCTNTANTNGGACCTTGGNCCCGCAACCACCGCTT

16513.1.edlt

ACCGTGGTCCCGGCCGAGGTCTGGCCCTCTTGGCAAGGCTGCTGAACATGGGTACCCCTCG
AAAACTCGAGACCTCTGTCAGAGAGGAGTGTGTGACACAGGGTGTCTGCTGCTTTCCC
TGGAACTCGTGAATCTCTGCTTCAAAAGGCAATTAGGGGACACAAATGCTCTGGAATGATTO
AAGGACAGCCCGGCTCTGCTGTGAAGGGTGAACCTGGNCCCGCTGCTGAAAATGGA
ACTCCAGCTCAAAACAGGAGCCGCGGCTTCTCGNAGAGAGGACGTTGCTGGTCCCT
GGCCCANACCTGCCCTGGCCCGCCGCTTCAAAAGCCGAAATCCAGNACACTGGCGGCGGNT
ACTANTGGAATCCGAACCTTGGTACCAAAAGCTTGGCCGTATGATGCCCATAGCTTGTTC
CTGGGCGGAAATTCCTATCCCTCTNCAATTCACACAAATAACCGAAACCCGAAAGCA
TTAAAGTCAAAAGCTTGGGGGGGCTTAAATGANGTCAACNTAACTGNCATTTAATTCG
CGTTCCGCTTCACTGCGCGGCTTTCAGTCCCGGNA

16513.2.edlt

TGAGCGGGCCCGCCGGGCAGGTCTGGCCGAGGGCCACCAACAGCTCTCTCTCACCAGGA
AGCCACCGGCTCTCTTTGACCTGGAGTTCCATTTTACCAGGGGACACAGCTTACCTT
TCACACAGGAGGACCGGGCTGTCTCTTCAATCCATCCAGACCATTTGTCCTCAATGCC
TTTGAAGCCAGGAAATCCAGGAGTTCCAGGGAACCCAGCAGCAGCTGTCTCTCAACCAAC
TCTCTCTCACAGGCTGTCTGGGCTTTTCCAGGGTGACCATCTTACCAGCCTTGGCAGGA
GGGCCAGACCTCGCCCTCCGACCACT

FIG. 15WW

16516.1.edit

ANCGTGGTCGCGGCGGAGGTCTCTCACCAGAGGTGNCACCTACAACATCATAGTGGAGGCA
CTGAAAGACEANCAGAGGCATAGGTTCCGGGAAGAGG

16516.2.edit

TCGAGCGCGCGCGCGGCGGAGGTCCAATTTCTCCCTGACGGTCCCACTTCTCTCCAATCTTGT
AGTTCACACCAATTGTCAATGGCACCATTCTAGATGAATCACAATCTGAAATGACCACTTCCAAA
GCCTAAGCACTGGGCACAACAGTTTAAAGCCTGATTCAGACATTCGTTCCCACTCATCTCCA
ACGGCATAATGGGAAACTGTGTAGGGGTCAAAGCAGGATCATCCGTAGGTTGGTTCAAG
CCTTCGTTGACAGAGTTGTCCACGGTAACAACCTTTCCCGAACETTATGCCCTCTGCTGGTC
TTTCAGTGCCTCCACTATGATGTTGTAGGTGGCAGCTCTGGTGAGGACCTGNGNCCNGAAC
AACGCTTAAGCCCGNATTCTGCAGAATAATCCCATCACACTTGGCGGCGGCTTCGANCATG
CATNTAAAAGGGGCCCCAATTTCCCCCTTATAAGNGAANCCGTATTINCCAATTTCACTG
GNCCCGCGNTTTTACAAACGNCGGTGAATCGGGAAAAACCTCGCGGTTACCCAACTT
TAATCGCCCTTGGCAGGACAATCCCCCTTTTCGNCCANCNTGGGCGTAAATAACCGAAAA

16517.1.edit

ANCGNCGTCGCGGCGGCOANGTNTTTTCTNTTTTTT

16518.1.edit

ACCGTGGTCGCGCGGAGGCTCTCAGCTTACATCCGTGGTGGTGGACGTGAGCCACGAAGA
CCCTCAGGTCAAGTCAACTCGTACGTGGACGGCGTGAAGGTGCATAATGCCAAGACAAA
GCGCGCGGAGGAGGAGTACAAACAGCACTACCGCGGCGGTCAAGCTCTCTCAGCTCTCTCA
CCAGAAATGCTTGAATGGCAAGGAGTACAAGNOCAGGTTTCCAACAAAGCCNTCCCAAG
CCGNTGCAAAAAACCAATTTCCAAAGCCAAAGGGCAGCCCCGAGAACCACAGGTGTACAC
CCTGCCCGCATCCCGGAGGAAAGCANCANAAACGNGGTTCAAGCTTAACTTGGTGGTC
NA,ANGCTTTTATCCCAAGCACTTCCCCGNTGCAANTGGGAAAAACCAATGGGCCAANC
CGAAAAACAATTACAANAACCC

16518.2.edit

TCGATCGCGCGCGCGGCGGAGGTGTGCGAAGTCCAGCAAGGAGGCGTGGTCTTGTAGTTGT
TCTCCGCGTGGCCATTCTCTGCCACTCCACGGGATGTCCTGGGATAGAAAGCCTTTGAC
CAGGCAGGTCAAGCTGACCTGGTTCTTGGTCACTCTCTCCCGGATGGGGGACGGGTGAA
CAGCTGGGTTCTCGCGGCTTGGCTTTGGTTTGAANATGGTTTCTCGATGGGGGCTGG
AAGGGCTTGTGONAAACCTTCCACTGACTCTTGGCAATCAGCCAGNCCTGGNCCAGGA
CGGNGAGGACNCTNACCACAGCGAACCAGGCTGGTGGACTCTCC

FIG. 15XX

16519.1.edi:

AGCGTGGTGGGGACGANGTCTGTTCAGAGTGGNACTGGTACAAAGTTCCANGAACCCCTGA
 ACTGTAAAGGOTTCTTCATCAGTGGCAACAGGATGACATGAAATGATGTACTCAGAAGNGN
 CCTGGAAATGGGGCCCATGANAATGGTTGCC

16519.2.edi:

TCGAGCGGGCCCGCCGGGCAGGTCCACCACACCCCAATTCCTTGCTGTATCATGGCAGCCGC
 CAGGTGGCAGGATTACGGCTACATCATCAAGTATGAGAAGCCTGGGTCTCTCTCCAGAGA
 AGTGGTCTCTCGGGCCCGCCCTGGTGTACAGAGGCTACTATTACTGGCTGGAAACCGGGA
 ACCGAATATACAATTTATGTCAITGGCCCTGAAGAATAATCAGAAGAGCGAGCCCTGATTG
 GAAGGAAAAAGACAGACGAGCTTCCCAACTGGTAACCTTCCACACCCCAATCTTCATG
 GACCAGAGATCTTGGATGTTCTTCCACAGTTCAAAAGACCCCTTTCGGCACCCCGCCCTGG
 GTATGAACCTGGGAAAAANGONANTTAANCITTTCTGGCA

16520.1.edi:

AGCCTGGTGGCGCCCGGAGGTCTGGCAATGCTCTCTGTCTCACAGTGAGATATTACAGGATC
 ACTTACGGAGAAACAGGAGGAAATAGCCCTGTCCAGGAGTTCACTGTGCTGGGAGGCAAG
 TCTACAGCTACCATCAGCCGCCCTTAAACCTGGAGTTGATTATACCATCACTGTGTATGCTG
 TCACTGGCCGTGGAGACAGCCCGCCCAAGCAGCAAGCCCAATTTCCATTAAATTACCGAACAG
 AAATTGACAAACCATCCAGATGCAAGTGAACCGATGTTCAAGGACAAACAGCAATTAGTGTCA
 AGTGGCTGCTTCAAGGTTCCTGTACTGGCTTACAGANTAAACACCACTGCCAATAATG
 GACCAGGAAGCACAATAAATTTAACTTCCAGGCTCCAGATCAAAACAGAAATGACTATTGA
 ANGCTTGCACCCCTACACTGGGAGTATENGCTTGTGCTATGCTTCAGAAATCCAAAGCGGA
 AAAANGTCAACCTTNTGGCTTCAA

16520.2.edi:

TCGAGCGCGCCCGCCCGGCAGGTCTCTCCAGTGTCTTCTTCAACCATCAGGTGCA
 GGGAAATAGCTCATGATTCCATCTCTAGGCTTCGAGTACCTCAGCTGTACCTGGAAACTT
 GCGCTGTGCGCTTTCCCAAGCAATTTGATGGAAATCGACATCCACATCAGTGAATGCCAG
 TCTTTAGGGGATCAATGTTTCTTACTCCAGNETGAACCAAGAGGCTGACTCTCTCCGCTT
 GGATTCGAGCATAGACATAACACATACTCCACTGTGGGCTGCAANGCTTCAATAANNC
 ATTTCTGTTTGATCTGGACC

16521.2.edi:

TCGAGCGCGCCCGCCCGGCAGGTCTGCTGGGCTCTCGGCACACCCACATGGGGNGTTGNT
 CTNATCCAGCTGCGCAGCCCGCAATGGCTGAGTTGAGAAAGGTGTGAGCAATGACAAACA
 NACCTTGACTCTTCTGCACTTCTTGGCAAGTGTACCTTGGAGGGCCACCAAGAAAG
 GGGCACAAGCTCCACCTGGACTACATCGGGCCCTTGCAAAATACATCCCGCTTGGCTGGACT
 CTGAGCTGACCGAATTCGGCTTGGCCATCGGGGACTGGCTCAAGAAGCGTCTGGGACCC
 TTGTATCANAGCGATGAACACACNACCC

FIG. 15YY

16522.1.edit

AGCGTGGTGGGGGGGAGGTCTGTCTACAGTCTCAGGACTCTACTCCCTCAGCAGCGTG
 GTGACCGTGCCCTCCAGCAACTTCGGGACCCAGACCTACACCTGCAACCTAGATCACAAGC
 CCAGCAACACCAAGGTGGACAAGAGAGTTGAGCCCAATCTTGTGACAAAATCTCACACAT
 GCCCACCGTGCCCGAGCACTGAACTCCTGGGGGGGACCCTCAGTCTTCTCTTCCCCCGCAT
 CCCCCTTCCAAACCTGCCCCGGGGGGGGCGCTCGAAAGCCGAATTCCACCACACTGGCGGGCG
 GTACTAGTGGANCCNAACTTGGNANCCAACTGGNGGAANTAAATGGGCATAANCTGTTTC
 TGGGGGGAAAATTGGTATCCNGTTTACAATCCCNACAAACATACGAGCCGGGAAGCATAAA
 AGNGTAAAAGCCTGGGGGNGGCCCTANTGAAGTGAAGCTAAACTCACATTAATTNGCGTTG
 CCGCTCACTGGCCCCGCTTTTCAGC

16522.2.edit

TCGAGCGGGGGGGGGGGGAGGTTTGGAAAGGGGGATGCGGGGGGAAGAGGAAGACTGACGG
 TCCCCCAGGAAGTTCAGGTGCTGGGCACGGTGGGCAATGTGTGAGTTTGTGACAAGATTG
 GGCTCAACTCTCTTGTCCAGCTTGGTGTCTGCTGGCTTGTGATCTACCTTCCAGGTGTAGGT
 CTGGGNGCCGAAGTTGCTGGAGGGGACGGTCACCACCTGCTGAGGGAGTAGAGTCTGA
 GGACTGTANACAGACCTCGGCCGNGACCACCTAAGCCGAATTCTGCAGATATCCATCA
 CACTGGCGGGGGCTCCGAGCATGCATTTAGAGG

16523.1.edit

AGCGTGGNCOCGGACGANCACAACAACCC

16523.2.edit

TCGAGCGGGGGGGGGGGGAGGNCACATCGGCAGCGTCCGAGCCCTGGCCGGCCATCTCG
 AACTGGAATCCATCGGTCACTCTTGGGGAACCAAGACATGCCCTTTGTCTTGGGGTTCTT
 GCTGATONACCACTTCTTCTGGGCCACACTGGGCTGAGTGGGGTACACCGAAGGTCTCACCA
 GTCTCCATGTTGCAGAACTTTGATGCCATCCAGGTTCCAGCCTTGGTTGGGGTCAATCC
 AGTACTCTCCACTCTTCCAGTCACAGTGGGACATCTTGAGGTACGGCAAGGTGGGGGGGG
 GTTCTTCACT

16524.1.edit

AGCGTGGTGGGGGGGAGGTCCACCCCTGAGATAANGGTGAAGGTGGTGGCCCCGGACTT
 CCAGGTATAGCTGGACCTCGTGGTAGCCCTGGTGAAGAGAGGTGAAACTGGCCCTCCAGGA
 CCTGCTGGTTTCCCTGOTCTCTCTCCACABAATGGTGAACCTGGNGGTAAAGGAGAAAGA
 GGGGCTCCGNTGANAAGGTGAAGGAGCCCTCTGNAATTGGCAGGGGGCCCAAGACTT
 AGAGGTGGAGCTGGCCCCCTGGCCCTGGAAGGAGCAAGGCTGCTGCTGCTCTCTGGG
 CCACCTGG

FIG. 15ZZ

16524.2.edit

TCGAGCGGGCCCCCGGCGAGGTCTGGGCCAGGAGGACCAATAGGACCACTAGGACCCCTT
GGGCCATCTTTCCCTGGGACACCATCAGCACCTGGACCGCCTGGTTCACCCCTTGTACCCCTT
TGGACCAGGACTTCCAAAGACCTCCTCTTTCTCCAGGCATTCTTGCAGACCAGGAGTACCA
NCAACACAGGTGGCCCCAGGAGGACCAAGCAGCACCCCTTCTCTCTCGGGACCAAGGGGA
CCAGCTCCACCTCTAACTCCTGGCGCCCTGCCAATCCAGGAGGGCCTCCTTCACCTTTCTC
ACCCGGAGCCCCCTCTTTCT

16526.1.edit

TCGAGCGGGCCCCCGGCGAGGTCCACCGGATATTGGGGGTCTGGCAGGAATGGGAGGC
ATCCAGAACGAGAAGGAGACCATGCCAAAGCCTGAACGACCCCTGGCCTCTTACCTGGAC
AGAGTGAGGAGCCTGGAGACCGACAACCGGAGCCTGGAGAGCAAAATCCGGGAGCACTT
GGAGAAGAAGGACCCAGGTCAAGAGACTGGAGCCATTACTTCAAGATCATCGAGGACCT
GAGGGCTCANATCTTCCGCAATACTCGGAGCAATGCCCG

16526.2.edit

ATGCGNGGTGGCGGCGGANGACCAACTCTGGCTCATCTTGACTCTAAAGNCTCACCAG
NANTTACCGNCAATGCCAACTCCAGAACGATGCCGGCATTGTCCGCANTAATTCGGAAG
ATCTGACCCCTCAGGNCCTCGATCATCTTGAAGTAANGGCTCCAGTCTCTGACCTGGGGTC
CCTTCTTCTCCAACTGCTCCCGGATTTGCTCTCCACCCCTCCGTTCTGGGTCTCCAAGNCT
TCTCACTCTGTCCAGGAAGAAGAGCCGAGCGGCGNCGATCAGGGCTTTTGCATGGACT

16527.1.edit

AGCGTGCTCGCGCCCCAGGTTGTACACCTCTTTTCTTTTCTTTTCTTTTCTTTTCTTTT
TT

16527.2.edit

TCGAGCGGGCCCCCGGCGAGGTCTGCCAAGACCAAGATTGGCCCCCGCCGCATCCACACA
GTTNGTGTGGGGGAGGTAAACAAGAAATACCGTCCCTGAGGNTGGACGNGGCGAATTTT
TCTTGGGGCTCAGAGTGTGTACTCGTAAACAAGGATCATCGATGTTGTCTACAAATOCAT
CTAATAACGAGCTGTTCGTACCAAGACCTGGTGAAGAATTGCATCGTGCTCATNGACA
GCACACCGTAACCAAGCTGGGTACCGAAGTCCCACTATGCNCT

FIG. 15.AAA

16539.1.edit

TCGAGCGGGCGGGCGGGCAGGTCCACGACACCCAAATTCCTTGCTGGTATCATGGCAGCCGC
 CACGTGCCAGGATTACCGGCTACATCATCAAGTATGAGAAGCCTGGGTCTCTCCAGAGA
 AGTGGTCCCTCGGCGCCCGCCCTGGTGTACAGAGGCTACTATTACTGGCCTGGAACCGGA
 ACCGAATATACAAATTTATGTCAATGCCCTGAAG

16539.2.edit

AGCGTGNTCNGCGCCGAGGATGGGGAAGCTCGNCTGTCTTTTCTTCCAATCAGGGGCTN
 NNCTTCTGATTATTCTTCAGGGCAANGACATAAATTTGTATATTCCGNTCCCGTTCCAGN
 CCAATAATAGTAGCCTCTGTGACACCAAGGCGGGCGGGAGGGACCACTTCTCTGGGAGGA
 GACCCAGGCTTCTCATACTTGTATGATGAAGCCGGTAACTCTGGCACGTGGGCGGCTGCCAT
 GATACCACCAANGAATTTGGGTGTGGTGGACCTGCCCCGGGCGGGCGGCTCGAAAAACCGAA
 TTCTGTCAAGAATATCCATCACACTTGGGCGGGCGGCTCGAAAAACCGAA
 CCGCAATTTCCCCCTATTAGGNGAAGCCNCATTTAACAATTCCACTTGG

16539.1.edit

TCGAGCGGGCGGGCGGGCAGGTCTCGGCGTGGCACTGGTGATGCTGCTGCTGTTGGTCCCC
 CCGGGCTCTGTGACCTCTGTGCTCCCTGGTCTCTCCAGCGCTGGTTTCGACTTCAGCTTC
 CTGCCCCAGCCACCTCAAGAGAAGGCTCAGGATGGTGGCGGCTACTACCGGGCTGATGAT
 GCCAATGTGGTTCGTGACCGTGAACCTGGAGGTGGACACCACTCAAGAGCCCTTGAAGCA
 GCAGAAATGAAAAACATTCGGAACCCAGGAAGGGCAAGCCCGCAAGAAACCCCGGGCGG
 ACCTGGCCCGGAACCTCCAGGAAGGTGGCCACNTTTGACTGGGAAAAAAAGGGGAAANT
 ACTTGGAAATGGAC

16539.2.edit

AGCGTGGTGGGCGGGCAGGTCCACATCGGCAAGGTGGGAGCCCTGGCGGGCATACTCGAA
 CTGGAATCCATCGGTCAATCTCTCGGCGAACCAGACATGCTCTTGTCTCTGGGCTTCTTGC
 TGAATGATACCACTTCTCTGGGCGACACTCGGCTGAGTGGGTACAGCCAGGTCTCAGCAGT
 CTCCATGTTGCAGAACACTTTCATGGCATCCAGGTTCCAGCCTTGGTTGGGGTCAATCCAG
 TACTCTCCACTCTTCCACTCAGAAAGTGGGACATCTTGAAGGTCAAGGCCAGGTTGGGGCGGG
 GTTCTTGGGGCTGCCCTCTGGGCTCCGGCAATGTTCTNNGAACTTCTGG

FIG. 15BBB

16530.1.edi

AGCGTGGTCCCGCCGAGGTCCACTAGAGGTCTGTGTGCCATTGCCAGGCAGAGTCTCTG
CGTTACAAACTCCTAGGAGGGCTTGCTGTGCCGAGGGCCTGCTATGGTGTGCTGCGGTTCA
TCATGGAGAGTGGCGCCAAAGGCTGCGAGGTTGTGGTGTCTGGGAACTCCGAGGACAGA
GGGCTAAATCCATGAAGTTTGTGGATGGCCTGATGATCCACAGCGGACACCTGTAACTA
CTACGTTACACTTGCTTGTCGCCACGTGTGCTCANACANGGGGTGGGCTGGGCATCAAG
GNG

16530.2.edi

TCGACCGGCGCGCCGGGACAGGTCTGCCAAGGAGACCCCTGTTATGCTGTGGGACTGGCTG
GGGCATGGCAGGCGGCTCTGGCTTCCACCCCTTCTGTTCTGAGATGGGGGTGGTGGGCAGT
ATCTCATTTTGGGTTCCACATGCTCACGTGCTCAGGCAGGGGCTTCTTAGGGCCAATCT
TACCAGTTGGTCCGAGCGGACCATGATCTTCACTTGATGCCAGGCACACCCCTGTCTGAC
CAACACGTGGCGCACAGCAAGTGTCAACGTAACTAAGTTAACAGGGTCTCCGCTGTGGAT
CATCAGGCCATCCACAACTTCATGGAATTAACCCCTCTGTCTCGGAG

16531.1.edi

TCGAACGGCGCGCCGGGACAGGTCTTCAAGCCTTCCAAGGTCCACTGTGGAGGTCCCAGG
AGTCTGGTGGTGGCCACAGAGTCCGATGGGTGAAACCATTGACATAGAGACTGTTCT
GTCCAGGGTGTAGGGCGCCAGCTCTTGATGCCATTGCCAGTTGGCTCAGCTCCCACTAC
AGCGGCTCTCTGTGAGTCCAGGGCTTTTGGGTCAAGATGATGGATCCAGATGGCATCCA
CTCCAGTCCGCTCTCCATCTTCTGGGAGCTGAGAGAGGTCAGTCTGCCAGCCAGAGTACAG
AGGGCCACACCTGCTGTCTTTGAATA

16531.2.edi

AGCGTGGTCCCGCCGAGGTCTGTACTCCGAGCTAAACAAAGTGACCAATGACATTOAAG
AGCTGGGCCCCCTACACCTGGACAGGAACAGTCTCTATGTCAATGCTTCCACCCATCAGAG
CTCTGTGONCCACCACCAAGCTCTCTGGACCTCCACAGTGGATTTGAGAACCTCAGGGACT
CCATCCTCCCTCTCCAGCCCCACAAATATGGGTGCTGGGCTCTCTGTGTACCAATTCACCT
CAACTTCACCATCACCACCTGGAGTATGGGAGGACATGGGTCAACCTGNETCCAGGA
GTTCAACACCA

16532.1.edi

TCGACCGCGCGCCGGACAGGTCTGGGCGGATAGCACCGCGGCTATTTGGAAATGGATGA
GGTCTGGCACCTTGAGCAGTCCAGGACGACTTGGTCTTAGTTGAGCAATTTGGCTAGGAG
GATAGTATGACAGCAGGNETGAGNETCTGGGATAGCTGCCATGAAGTAACCTGAAGGAG
GTGCTGGCTGOTANGOOTTGATTACAGGCTTGGGAACAGCTCGTACACTTGGCAATCTCTG
CATATACTGGTTAGTGAGGTGAGCCTGGCCCTCTCTTTG

FIG. 15CCC

01_16328.3.edit

AGCGTGGTCCGCGCCGAGGTGAGCCACAGGTGACCGGGCTGAAGCTGGGGCTGCTGGNC
CTGCTGGTCTG

02_16328.4.edit

CAGCNGCTCCNACGGGGGCTGNGGGACCAACAACACCGTTTTCACCCCTTAGGGCCTTTGGC
TCTCTTTTCTCCTTTAGCACCAGGTTGACCAGCAGCNCANAGGACCAGCAAATTCATTG
GGCCAGCAGGACCGACCTCACCAAGTTTACCAGGCTTCCCCGAGGACCAGCAGGACCA
GCAGGACCAGCAGCCCCAGCTTCCGCCCGGTACCTGTGGCTCACCTCGGGCCGGACCAAG
CT

03_16335.1.edit

TCGAGCGGTCCGCCCGGGCAGGTCCACCGGGATACCGGGGCTCTGGCAGGAATGGGAGGC
ATCCAGAAACGAGAAGGAGACCATGCCAAAGCCTGAACGACCGCCTGGCCTTTACCTGGAC
AGAGTCAGGAGCCTGGAGACCGAANAACCGAGGCTGGANAGCAAAATCCCGGAGCACTT
GGAGAAAGGAGGGACCCAGGTCAAGAGACTGGAGCCATTACTTCAAGATCATCGAGGGA
CCTGGAGG

04_16335.2.edit

AGCGNGTCCCGCCCGAGGTCCAGGTCTCTCTCACTTCACTCTAAAGTCATCACCAGCA
AGACGGGCATTGTCAATCTGCAGAACCAATCGCGGCATTCTCCGCACTATTTCGGAAGATCT
GAGCCCTCAGGTCTCTGATGATCTTGAAGTAATGGCTCCAGTCTCTGACCTGGGGTCCCTT
CTCTCCAAAGTCTCTCCCGCATTTCTCTCTCAAGCTCCGCTTCTCGGTCTCCAGGCTCTCA
CTCTGTCCAGGTAAAGAGGCCAAGGCTCTCTTCAAGCTTTCATGCTCTCTCTCTCTCT
GGATGCCCTCCCATTCCTGCCAGACC

05_16336.1.edit

TCGAGCGGCGCGCCCGGGCAGGTCCAGGAAGCAATTGGTCTTAGAGCCACTGCCCTCCTGGA
TCCACCTGTCTGCTGCGGACATCTCCAGGAGTGCAGAAAGGGAAGCAGGTCAAATCTGCTCA
GATCAGTCAAGACTGCTGTCTCTCACTTCTCACTTGAGCAAGGTCAAGTCTGACCCAGAGTA
CAGAGGGCCAAACACTGGTGTCTTGAACAAGCGCTTGAGCAGACCTTCCAGAACCTCTTC
CGTGGTCTTCAACTTCTCTGAAACCACGGTGTTCATGTTTTCTTCATAATGCAAGGTTG
GTGATCG

FIG. 15DDD

07_16337.1.edt

AGCGTGGTGCGGGCCGAGGTCCACATCGGCAGGGTCGGAGCCCTGCCCCCATACTCGAA
CTGGAATCCATCGGTTCATGCTCTCGCCGAACAGACATGCCTCTTGTCTTGGGGTTCTTGC
TGATGTACCACTTCTTCTGGGCCACACTGGGCTGAGTGGGGTACACCGCAGGTCTCACCAG
TCTCCATGTTGCAGAAGACTTTGATGGCATCCAGGTTGCAGCCTTGGTTGGGGTCAATCCA
GTACTCTCCACTCTTCCAGTCAGAAGTGGGCACATCTTGAGGTCACCGCCAGGTGCCGGGC
CGGGGGTTCTTGGGCTTGGCCCTCTGGGCTCCGGATGTTCTCGATCTGCTTGGGTCAGGCTC
TTGAGGGTGGGTGTCCACCTCGAGGTCACGGTCAACGAAACCTGCCCGGGCGGCCCGCTC
CA

08_16337.2.edt

TGGAGCGGTGCCCCGGGCAGGTTTCTGTGACCGTGACCTCGAGGTGGACACCACCCTCAAG
ACCCTGAGCCAGCAGATCGAGAACAATCCGGAGCCCAGAGGGCAGCCGCAAGAACCCCGC
CCGCACCTGCCGTGACCTCAAGATGTGCCACTTGTACTGGAAGAGTGGAGAGTACTGGAT
TGACCECAACCAAGGCTGCAACCTGGATGCCATCAAAGTCTTCTGCAACATGGAGACTGGT
GAGACCTGCGTGTACCCCACTCAGCCCACTGTGTGGGCCCCAGAAGAACTGGTACATCAGCA
AGGAACCCCAAGGACAAGAGGCAATGTCTTGGTTCCGGCGAGNAGCATGACCCGATGGATT
CCAGTTTTCAGTATTGGCGGCCAGGGCTTCCCGACCCCTTGCCGATGTGGACCTCGGGCCCCG
ACCACCGT

FIG. 15EE

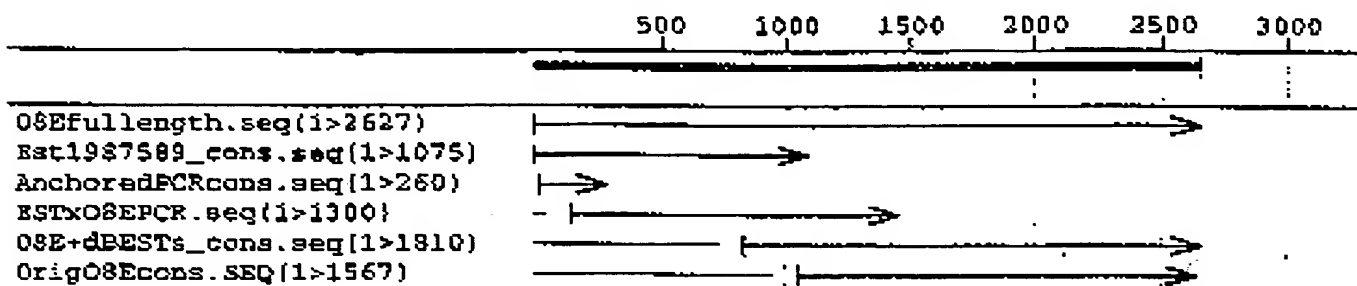


Fig. 1b

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
22 June 2000 (22.06.2000)

PCT

(10) International Publication Number
WO 00/36107 A3

(51) International Patent Classification⁷: C12N 15/12,
C07K 14/47, C12N 15/62, 15/11, C12Q 1/68, G01N
33/68, C07K 16/18

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(21) International Application Number: PCT/US99/30270

(22) International Filing Date:
17 December 1999 (17.12.1999)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/215,681 17 December 1998 (17.12.1998) US
09/216,003 17 December 1998 (17.12.1998) US
09/338,933 23 June 1999 (23.06.1999) US
09/404,879 24 September 1999 (24.09.1999) US

(81) Designated States (*national*): AE, AL, AM, AT, AU, AZ,
BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK,
DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,
IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU,
LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT,
RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA,
UG, UZ, VN, YU, ZA, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent
(AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent
(AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU,
MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GW, ML, MR, NE, SN, TD, TG).

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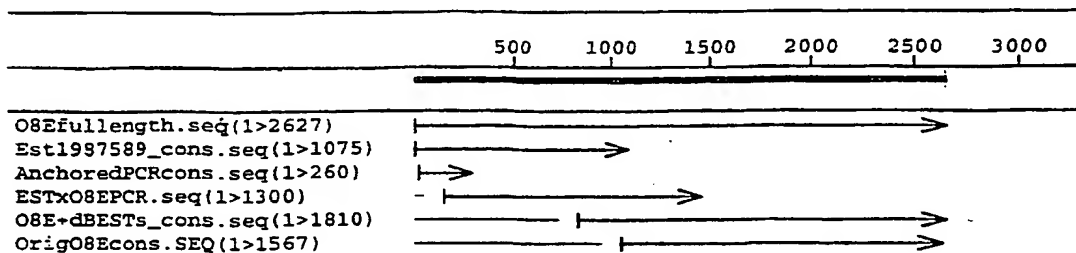
Published:
— With international search report.

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(88) Date of publication of the international search report:
22 February 2001

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: COMPOSITIONS AND METHODS FOR THERAPY AND DIAGNOSIS OF OVARIAN CANCER



(57) Abstract: Compositions and methods for the therapy and diagnosis of cancer, such as ovarian cancer, are disclosed. Compositions may comprise one or more ovarian carcinoma proteins, immunogenic portions thereof, polynucleotides that encode such portions or antibodies or immune system cells specific for such proteins. Such compositions may be used, for example, for the prevention and treatment of diseases such as ovarian cancer. Methods are further provided for identifying tumor antigens that are secreted from ovarian carcinomas and/or other tumors. Polypeptides and polynucleotides as provided herein may further be used for the diagnosis and monitoring of ovarian cancer.

WO 00/36107 A3

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 99/30270

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12N15/12 C07K14/47 C12N15/62 C12N15/11 C12Q1/68
G01N33/68 C07K16/18

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12N C07K C12Q G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>K. ISHIKAWA ET AL.: "Prediction of the coding sequences of unidentified human genes. The complete sequences of 100 new cDNA clones from brain which can code for large proteins in vitro." DNA RES., vol. 5, 1998, pages 169-176, XP002121149 the whole document</p> <p style="text-align: center;">--- -/--</p>	3,4,6

☒ Further documents are listed in the continuation of box C.☐ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
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- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

15 May 2000

Date of mailing of the international search report

17. 08. 2000

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Hix, R

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 99/30270

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>MA J ET AL: "USE OF ENCAPSULATED SINGLE CHAIN ANTIBODIES FOR INDUCTION OF ANTI-IDIOTYPIC HUMORAL AND CELLULAR IMMUNE RESPONSES"</p> <p>JOURNAL OF PHARMACEUTICAL SCIENCES,US,AMERICAN PHARMACEUTICAL ASSOCIATION. WASHINGTON, vol. 87, no. 11, November 1998 (1998-11), pages 1375-1378, XP000877492 ISSN: 0022-3549 the whole document</p> <p>---</p>	
A	<p>GILLESPIE A M ET AL: "MAGE, BAGE AND GAGE: TUMOUR ANTIGEN EXPRESSION IN BENIGN AND MALIGNANT OVARIAN TISSUE"</p> <p>BRITISH JOURNAL OF CANCER,GB,LONDON, vol. 78, no. 6, September 1998 (1998-09), pages 816-821, XP000892404 ISSN: 0007-0920 the whole document</p> <p>---</p>	
A	<p>PEOPLES G E ET AL: "OVARIAN CANCER-ASSOCIATED LYMPHOCYTE RECOGNITION OF FOLATE BINDING PROTEIN PEPTIDES"</p> <p>ANNALS OF SURGICAL ONCOLOGY,US,RAVEN PRESS, NEW YORK, NY, vol. 5, no. 8, December 1998 (1998-12), pages 743-750, XP000892412 ISSN: 1068-9265 the whole document</p> <p>---</p>	
A	<p>BOOKMAN M A: "BIOLOGICAL THERAPY OF OVARIAN CANCER: CURRENT DIRECTIONS"</p> <p>SEMINARS IN ONCOLOGY,US,BETHESDA, MD, vol. 25, no. 3, June 1998 (1998-06), pages 381-396, XP000892403 the whole document</p> <p>---</p>	
A	<p>KOEHLER S ET AL: "IMMUNOTHERAPIE DES OVARIALKARZINOMS MIT DEM MONOKLONALEN ANTI-IDIOTYPISCHEN ANTIKOERPER ACA125 - ERGEBNISSE DER PHASE-LB-STUDIE. IMMUNOTHERAPY OF OVERIAN CARCINOMA WITH THE MONOCLONAL ANTI-IDIOTYPE ANTIBODY ACA125 - RESULTS OF THE PHASE LB STUDY"</p> <p>GEBURTSHILFE UND FRAUENHEILKUNDE,XX,XX, vol. 58, no. 4, April 1998 (1998-04), pages 180-186, XP000892407 ISSN: 0016-5751 the whole document</p> <p>-----</p>	

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 99/30270

Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
Although claims 18 to 20, 27, 28, 35 to 41, 46 to 48 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-68 (partially)

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

1. Claims: 1-68 {partially}

An isolated polypeptide comprising at least an immunogenic portion of an ovarian carcinoma protein and encoded by SEQ ID NO:1, expression vectors comprising said polynucleotide, host cells transformed by said vector, pharmaceutical compositions and vaccines comprising the polypeptide encoded by said polynucleotide according to claims 9 to 17, 23 to 25 and 29 to 34, and methods of using said polynucleotides for the treatment and/or diagnosis of ovarian cancer and diagnostic kits comprising said polynucleotide.

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